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THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—16TH YEAR. SYDNEY, SATURDAY, JULY 6, 1929. No. 1.

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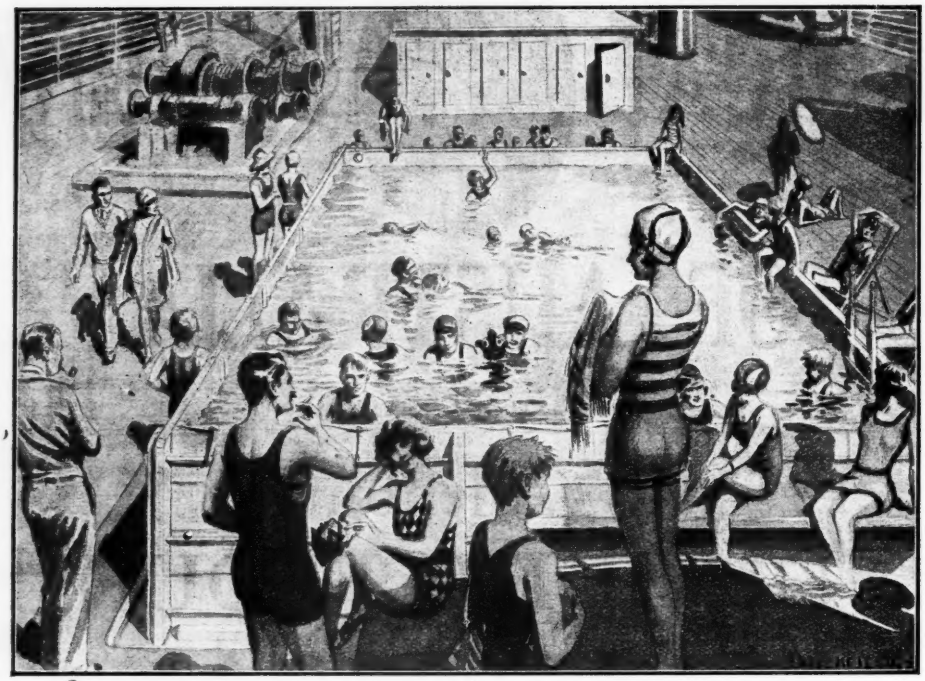

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FURTHER RESULTS IN THE BLOOD GROUPING OF SOUTH AUSTRALIAN ABORIGINES.[1]

By J. BURTON CLELAND, M.D., Ch.M. (Sydney),
Professor of Pathology, University of Adelaide,
AND
H. H. WOOLLARD, M.D., Ch.B., D.Sc. (Melbourne),
Professor of Anatomy, University of Adelaide.

Introduction.

As already indicated in previous papers by one of us,[1][2] as well as in the writings of others, great interest attaches to the question of the blood-grouping of the Australian aboriginal. There is reason to think that he has been isolated very completely from other races of mankind for a very long period of time. There is some evidence suggesting that the Australian aboriginal had reached this land when the volcanoes in southern Australia were still active. Though it is possible and indeed likely that in recent times there has been a certain amount of admixture of Malay or Papuan blood in the northern parts of the continent, there is no evidence that this intermixture has penetrated right through to the south. It therefore seemed quite likely that the Australian native compared with other races might show some differences in the relative proportion of the blood groups, the result of his long separation from other races of mankind and consequently pure descent. Moreover, it is possible that the Australian continent may have been originally populated from a small number, possibly only a pair, of castaways whose blood group constitution may have left a distinguishing mark on their descendants.

Our previous examinations of pure-blooded natives in southern Australia had shown that in 158 individuals 82 belonged to Group II (*A*) and 76 to Group I (*O*), Jansky (= Group IV, Moss). This may be paraphrased by saying that 82 of these natives contained in their red cells the agglutinogen *A*, that 76 did not contain any *A* and that the whole 158 showed an absence of agglutinogen *B*. These results, as far as they go, show that the southern Australian native is unique in either having no *B* at all in his make-up or having it in very small proportion. Other investigators studying the natives in New South Wales and Queensland have found the presence in small numbers of the other two blood groups, showing that in these natives *B* is present, but to only a small degree. The difference between these two sets of results is quite possibly explained by the most southern natives being of pure stock, whilst the more northern ones had suffered some racial intermixture which had introduced *B*.

This problem is of so much interest anthropologically that it was felt that still further testings should be carried out in southern Australia and a search made for individuals whose red cells contained *B*. Also, as a result of the suggestion made by Gilbert Phillips,[3] it seemed advisable to test the bloods of natives against themselves. Phillips had suggested that it was possible there might be agglutinogens contained in the red cells of aborigines which might not be detected by using the sera of white people, but which would be detected by cross-testing the aboriginal red cells by aboriginal sera. It was therefore determined to add to the number of pure-blooded aboriginals that had been grouped according to the key sera II and III, and at the same time to cross-test as many specimens of aboriginal blood as possible.

As a result of these further examinations 68 pure-blooded natives have been examined, of whom 45 were found to belong to Group II (*A*) and 23 to Group I (*O*). Thus in southern Australia altogether 226 aborigines have now been tested, of whom 127 belonged to Group II (*A*) and 99 to Group I (*O*), Jansky.

Source of the Material.

At the end of May, 1928, eight pure-blooded aborigines were tested at Point Pearce in the northern part of Yorke Peninsula, where there still remain a few full-bloods and a number of half-castes under official cognizance and to some extent control. One of the individuals thus grouped was a woman, the last remaining member of the Adelaide tribe, now resident at Wallaroo.

In August, 1928, a visit was paid to Koonibba Mission Station on the west coast near the Great Australian Bight. Fifty natives were examined and a further ten near Penong.

Summary of the Results.

At Point Pearce four of the individuals belonged to Group II and four to Group I. At Koonibba 34 belonged to Group II and 16 to Group I and at Penong seven belonged to Group II and three to Group I.

The Nomenclature Adopted.

As the Jansky classification has priority over Moss's classification, it has been decided to adopt this nomenclature. Groups II and III are the same in each case. Group I of Jansky is Group IV of Moss and Group IV of Jansky is Group I of Moss. In the previous two papers by one of us Moss's classification was adopted on account of its being the one in vogue surgically in this State.

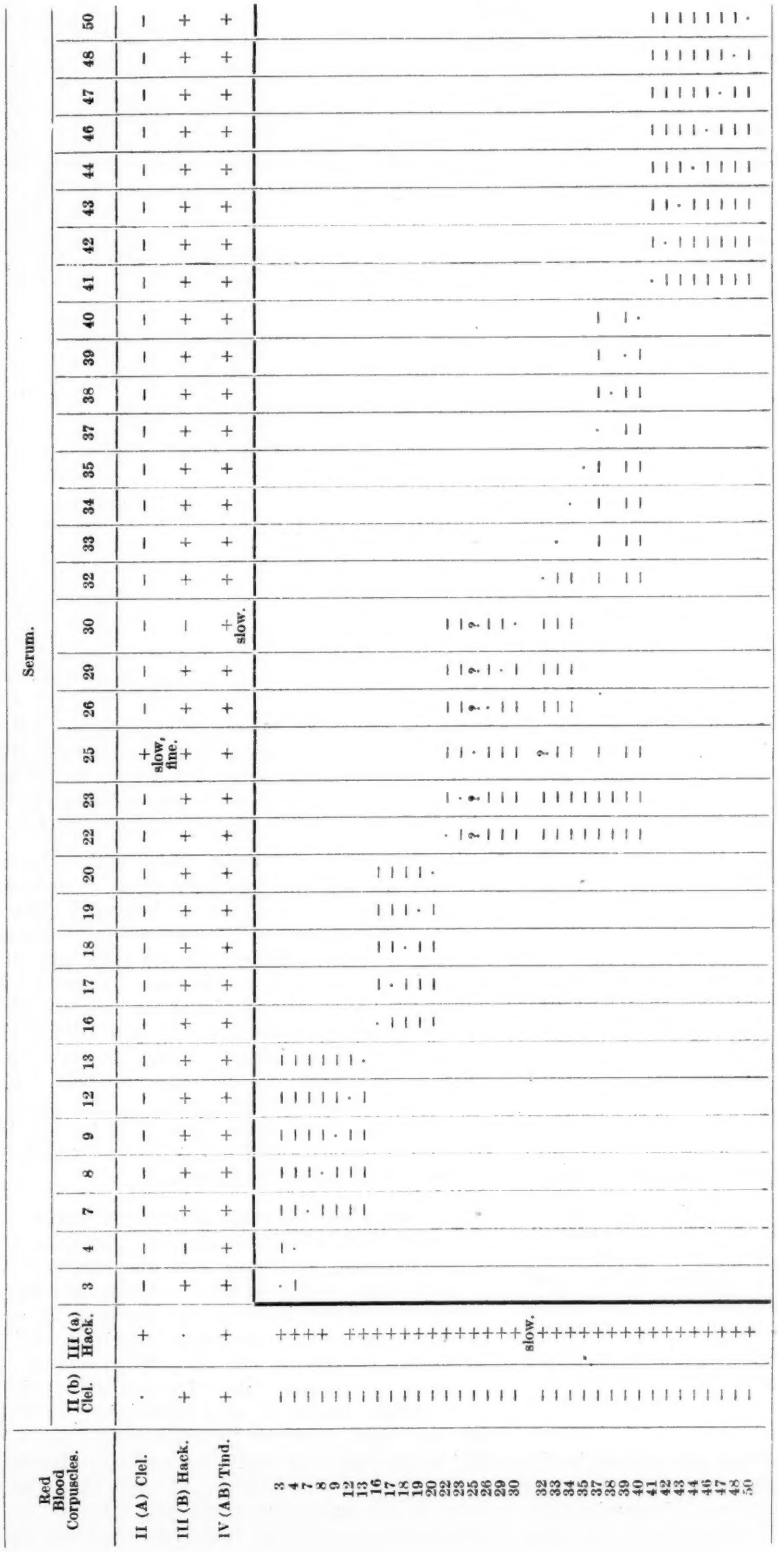
Methods Employed.

The procedure adopted in ascertaining the blood groups consisted in the employment of the usual key sera belonging to Groups II and III, the writer's serum being used as previously for Group II and Dr. Hackett's for Group III. These sera were thus employed by us in testing the Oodnadatta and Alice Springs natives in 1927. As recommended by Dyke[4] (1927), the red cells were diluted to a 1% suspension in a hæmocytometer pipette with normal saline solution. Equal portions of this suspension and of the serum were mixed together by means of

[1] Carried out under the auspices of the Board of Anthropological Research of the University of Adelaide, with financial aid from the Rockefeller Foundation Grant for Anthropology, administered through the National Research Council of Australia.

TABLE I.

Group II Red Blood Corpuscles *versus* Group II Serum.
A *versus* b.



a wooden tooth-pick on a slide and after rocking a naked eye examination was made, confirmed, if necessary, by the microscope, a two-thirds objective being used. No result was recorded until half an hour had elapsed. At the same time that the blood was taken in the hæmocytometer pipette a small glass tube was partly filled with blood which was allowed to clot. With the serum thus obtained other aboriginal red cells were tested as well as the red cells of known white members of Groups II and III.

The ear was chosen as the most suitable place for obtaining the blood and very little pain was experienced when a broad needle was inserted into it. It is of interest to note that not the slightest difficulty was experienced in inducing the natives to submit to the blood test. It was explained to them that we were anxious to see whether their blood resembled more that of the white man than did the blood of a Chinaman or negro. It is perhaps amusing that they should have agreed with us in thinking this would be the case. The mixing of a little of their blood with some of our own was watched with considerable interest by them.

As far as circumstances permitted the serum of each aboriginal was then tested against all the other fresh red cells available. It was considered inadvisable (and we would like here to thank Dr. L. B. Bull for emphasizing this point) to employ red cells which had been kept overnight. Anomalous results elsewhere may perhaps be attributed in part to the use of such stale red cells.

TABLE II.

Group II Red Blood Corpuscles *versus* Group I Serum.
A versus ab.

Red Blood Corpuscles.	Serum.															
	1	2	5	6	10	11	14	15	21	24	27	28	31	36	45	49
3	+	+	+	+												
4	+	+	+	+												
7	+	+	+	+	+	+										
8	+	+	+	+	+	+										
9	+	+	+	+	+	+										
12	+	+	+	+	+	+										
13	+	+	+	+	+	+										
16							+	+	+							
17							+	+	+							
18							+	+	+							
19							+	+	+							
20							+	+	+							
22										+	+	+	+	+		
23										+	+	+	+	+		
25										+	+	+	+	+		
26										+	+	+	+			
29										+	–	+	+			
30										+	+	+	+			
32														+		
33														+		
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35														+		
37														+		
38														+		
39														+		
40														+		
41															+	+
42															+	+
43															+	+
44															+	+
46															+	+
47															+	+
48															+	+
50															+	+

The attached tables will show to what extent it was possible to carry out this cross-testing. The red corpuscles of nearly every aboriginal were tested against one and in a number of cases against several samples of serum from other aborigines. It will be seen that altogether these cross-testings amounted to over 500. If amongst the natives themselves there were unusual groups not met with amongst white men, such would be expected to manifest themselves in these 500 tests. We were unable to find any evidence of further agglutinogens, but we did meet with some anomalous results which require explanation.

In addition the serum of each aboriginal was tested against known European red cells. At Point Pearce these red cells belonged to Group II (J. B. Cleland) and Group III (Dr. Hackett), though the testing with Dr. Hackett's red corpuscles was only made after our return to Adelaide next day. It has already been mentioned that Dr. Hackett and J. B. Cleland were the suppliers of the key sera employed throughout this work. At Koonibba the red cells employed were Group II (*A*) (J. B. Cleland) and Group IV (*AB*) (Jansky), the latter being supplied by Mr. Tindale, one of the party. Unfortunately Dr. Hackett could not accompany us, but samples of sera from most of these aborigines were tested against his red corpuscles after our return to Adelaide.

The results of the cross-testings are set out in the attached tables. They have been grouped so as to show the effect on native red cells, determined by the key sera as belonging to Group II, of the sera from all the other Group II aborigines; then the results of treating Group II red cells with Group I sera; then similarly Group I red cells tested against Group II sera and Group I red cells tested against Group I sera (see Tables I, II, III and IV).

An examination of these tables will at once show whether any mistake had been made in determining to which group the individuals belonged. The cross-testing would also show whether any anomalous results occurred between the red cells and the sera of natives allocated to the same blood group as tested with key sera of European origin. Phillips, as mentioned, has pointed out the advisability of doing this. These further results do show that the original grouping by us was correct. Certain anomalous results which appear in the tables seem best interpreted in other ways than by considering that blood factors occur in the Australian aboriginal which do not occur in Europeans.

The following will show that errors in the original determination would be at once detected by this cross-checking. If in any case the supposed Group II red cells which should contain *A* only, were incorrectly determined by the key sera II and III employed and really belonged to Group IV (*AB*) (Jansky) or Group III (*B*), the error would be detected by the red cells being agglutinated by the other native Group II sera containing *b*. This was not the case, with the possible exception of Blood 25. If the red cells really belonged to Group I (*O*) (Jansky) instead of Group II (*A*), then the serum (*ab*) would agglutinate the red cells of the other members of Group II, which was not the case. If

TABLE III.

Group I Red Blood Corpuscles *versus* Group II Serum.
0 *versus* b.

Red Blood Corpuscles.	II (b) Clel.	III (a) Hack.	Serum. 3	4	7	8	9	12	13	16	17	18	19	20	22	23	25	26	29	30	32	34	35	37	38	39	40	41	42	43	44	46	47	48	50
1																																			
2																																			
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a Group I (*O*) (Jansky) blood was wrongly determined and really belonged to Group IV (Jansky) (red cells *AB*) or Group III (*B*), it would be detected by the red cells being agglutinated by all the native Group II sera which would contain (*b*), and this was not the case. If the blood was really a Group II (*A*) blood, the red cells would be agglutinated by all the native Group I sera (*ab*) which was not the case.

Anomalies in the Results.

By an inspection of the tables it will appear that the original determinations of the specimens of blood by the key sera were correct. If certain anomalies that appear in the tables were not due to an error in the original determinations, then some other explanation must be sought. The anomalous results that have to be considered are the following.

Blood number 4, tested with key sera II and III, was placed in Group II and agrees in every way with the other Group II sera, save that after our return to Adelaide the serum when tested against fresh Group III red cells produced no clumping, when a positive result was expected.

At Koonibba the serum of this individual gave a positive result when tested against Group IV red cells, but when tested against these same red cells after our return to Adelaide, only some small clumps were formed. The probable explanation then of the anomalous results in this case is that the serum had deteriorated before our return to Adelaide, that the placing in Group II was correct and that no real anomaly existed.

Blood number 25: The key sera II and III placed this blood in Group II. Reversing, the serum of number 25 gave with Group II red cells a definite fine, slow, granular precipitate which remained incomplete even after a long time and which was not nearly so rapidly formed nor so coarse as the agglutination between the red cells of number 25 and key serum III.

Similar imperfect clumps were also obtained with this serum tested against the red cells of number 32, a native placed in Group II, and with the red cells of number 24 and number 31, placed in Group I. The red cells of number 25 gave similar reactions with the sera of numbers 22, 23, 26, 29 and 30, all belonging to Group II, that is all the native sera of Group II against which these red cells were tested gave this anomalous result. We found the red cells of number 25 were agglutinated by five native sera belonging to Group I—an expected result. It is probable that this anomalous reaction was not a true agglutination reaction, but is to be attributed to some other factor. The reaction never became complete; in no case was it a satisfying positive; all that probably can be said of it is that it was not a typical non-agglutination. It would be interesting to carry out estimations of the absorption of agglutinins with material from such a case.

In Table III, Group I red cells *versus* Group II sera, we found that the red cells of number 31 gave

TABLE IV.

Group I Red Blood Corpuscles *versus* Group I Serum.
O *versus* ab.

Red Blood Corpuscles.	II (b) Ciel.	III (a) Hack.	Serum. 1	2	5	6	10	11	14	15	21	24	27	28	31	36	45	49
II (A) Ciel.	·	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
III (B) Hack.	+	·	+	+	+	+	+	+	+	+	+	+	+	+	−	+	+	+
IV (AB) Tind.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1	−	−	·	−	−	−												
2	−	−	−	·	−	−												
5	−	−	−	−	·	−												
6	−	−	−	−	−	·												
10	−	−	−	−	−	−	·	−										
11	−	−	−	−	−	−	·											
14	−	−							·	−	−							
15	−	−							−	·	−							
21	−	−							−	−	·							
24	−	−										·	−	−	−			
27	−	−										−	·	−	−			
28	−	−										−	−	·	−			
31	−	−										−	−	−	·			
36	−	−														·		
45	−	−															·	..
49	−	−															−	·

TABLE V.

Ten Samples of Blood from Penong.

Red Blood Corpuscles.	II (b) J.B.C.	III (a) Hack.	Serum. 1	2	3	4	5	6	7	8	9	10	
II (A) Ciel.	·	·	−	−	−	−	−	−	+	+	+	−	
IV (AB) Tind.	·	·	+	+	+	+	+	+	+	+ slow.	+ slow.	+	
1	−	+											= Group II
2	−	+											= „ II
3	−	+											= „ II
4	−	+											= „ II
5	−	+											= „ II
6	−	+	−	−	−	−	−	·	+	+	+	−	= „ II
7	−	−	−	−	−	−	−	−	·	−	−	−	= „ I
8	−	−	−	−	−	−	−	−	−	·	−	−	= „ I
9	−	−	−	−	−	−	−	−	−	−	·	−	= „ I
10	−	+	−	−	−	−	−	−	+	+ slow.	+	·	= „ II

TABLE VI.

Eight Samples of Blood from Point Pearce.

Red Blood Corpuscles.	II (b) Ciel.	III (a) Hack.	Serum. 1	2	3	4	5	6	7	F.	
II (A) Ciel.			+	+	+	+	−	−	−	−	
III (B) Hack.			+	+	+	−	+	+	+	+	
1	−	−	−	−	−	−	−				= Group I
2	−	−	−	−	−	−	−				= „ I
3	−	−	−	−	−	−	−				= „ I
4	−	−	−	−	−	−	−				= „ I
5	−	+	+	+	+	+	−				= „ II
6	−	+	+	+	+	+ finally.	−				= „ II
7	−	+	+	+	+	+	−				= „ II
F.	−	+	+	+	+	+	−				= „ II

this anomalous indefinite reaction with the serum of 26 (and also of 25 as above mentioned) and the red cells of 36 were similarly affected by the serum of 37. Here again the reaction is, we believe, not due to true agglutination.

Blood number 29: This was determined as belonging to Group II when tested by the key sera. The reactions in all cases were correct, save that no agglutination was recorded when its red cells were tested against serum number 27 belonging to Group I. This was probably an error in entering up the record, as the anomaly was not noticed at the time and a reaction was obtained with three other sera belonging to Group I.

Blood number 30: The red cells did not agglutinate with Group II serum at Koonibba and

agglutinated, giving a slow reaction, with Group III serum. Its serum produced no agglutination with Group II red cells both at Koonibba and on our return to Adelaide and it also failed to agglutinate Group III red cells on the latter occasion, whereas a positive result would have been expected with the last named. If a mistake had been made and this blood really belonged to Group III, then its red cells should have been clumped by the sera of five natives belonging to Group II and such was not the case. Also its serum should have clumped the red cells of eight natives belonging to Group II and this again was not the case, though the indefinite clumping already discussed occurred in one case. If this blood really belonged to Group IV and therefore contained *AB*, then its red cells should have been clumped by the five sera of Group II, but such was not the case. It therefore seems that Blood 30 was properly placed in Group II, but that it shows the presence of an anomaly in its serum in not clumping the red cells of the particular Group III blood employed by us as a key. This was probably due to the deterioration on keeping of an originally weak agglutinin *b*.

Blood number 31: As mentioned, the red cells of number 31 gave the anomalous reaction with the sera of numbers 25 and 26. Tested with key sera at Koonibba, it was placed in Group I and its serum caused agglutination of the red cells of Groups II and IV. Nevertheless on our return to Adelaide its serum, tested against fresh Group III red cells, failed to produce agglutination as it should have done and also failed to do so with fresh Group IV red cells—red cells which it had previously agglutinated at Koonibba. It is evident that the serum had deteriorated, giving rise to the anomalous results in Adelaide.

Penong Blood.

Ten specimens of blood from Penong show no anomalies, though in several instances clumping was slow.

Point Pearce Blood.

One anomaly occurs in the Point Pearce blood specimens. The red cells of number 4 tested at Point Pearce with sera II and III gave no agglutination, placing the blood in Group I (*O*). Its serum containing *ab* should have agglutinated the red cells of Groups II (*A*) and III (*B*); but on our return to Adelaide failed with the latter (Dr. Hackett's red cells). Probably the agglutinin *b* was unusually weak.

Summary.

1. The blood grouping of a further series consisting of 68 pure-blooded Australian aborigines has failed to show the presence of the agglutinogen *B*.
2. Of 226 pure-blooded aborigines now tested by us in the southern portion of the Australian continent, 127 have belonged to Group II (*A*) and 99 to Group I (*O*). Groups II (*B*) and IV (*AB*) have not been met with.
3. In the small numbers available from this and our previous papers the relative proportions between Groups I and II seem to vary slightly in different districts.
4. By extensive cross-testing between aboriginal red cells and aboriginal sera no evidence was obtained that aboriginal blood contains factors not found in the blood of Europeans.

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(4) S. C. Dyke: "Determination of Compatibility in Bloods," *The Lancet*, October 29, 1927, page 900.

INCIDENTS OF PAST PRACTICE: A CHRONICLE OF TRIFLES.

By R. SCOT SKIRVING,
Sydney.

IN days of comparative professional desuetude, memory, which makes us ourselves, sometimes brings pleasant things from afar.

So now I call to mind small incidents of practice, quaint or amusing, sometimes pathetic, occasionally even tragic, but mostly events which are not so likely to occur in these later days when there is a more stereotyped kind of practitioner and even patients are not quite the same; they are too sophisticated and the schoolmaster is very much abroad. No doubt it means progress; the doctors are wiser; the patients more discriminating; but the general atmosphere of practice is not so amusing. I am glad, however, that the things I am about to relate were not unappreciated by me. Indeed I realized that they were germane to the period and I knew such an environment could not last.

Forsan et haec olim meminisse juvabit.

And so, now years later I rather enjoy telling these stories to myself with a kind of old world relish. Perhaps even the youngest and most modern of the present generation of doctors may smile indulgently when they read these trifling tales and forgive a senior falling into a too appreciable anecdotage.

The majority of the incidents I recount took place during the earlier part of my professional career, a time of general practice, strenuous, varied and instructive, the proper prelude, as I still strongly hold, to special or consulting work.

Unexpected Recoveries.

How often, even now, are we surprised at an unexpected recovery, when the lesion and the surroundings would justify the most pessimistic prognosis. Several such come into my memory.

Long before I became a doctor I followed another profession. Once, after a bitter July rounding of the Horn, our course was north. The wind came away fair and with everything set, even stun-sails (for I am old enough to have been shipmates with them), we rapidly left the cold parallels of Patagonia and with an increasing breeze flew towards warmer latitudes.

Sail was taken in slowly and unwillingly, until after splitting some canvas we found ourselves shortened down with a big following sea.

She was a deep ship and ran heavy and her decks were often full. After several days of strenuous sailing, as night fell, it was seen that the reefed main sail had to come off her. All the port watch were on the yard, struggling with the sail, which, in spite of all the gear being well up, was a big handful to master. In the middle of this job an unusually heavy roll parted the lashings of the after end of the big spare spar secured alongside the rail. The heel took charge and swung across the deck, half floating at times, when a heavy lop filled the main deck.

In its wild career it was a menace to life and limb as well as doing material damage. It had indeed managed to trip up an ordinary seaman and caught his head between its end and the after part of the iron coaming of the main hatch—nut cracker fashion—and it cracked poor Sullivan's little nut. The mate sang out for us "to leave the sail in its gear and lay down on deck to secure the spar." All hands were called. After much risk, the spar was parbuckled after a fashion up to the rail with a bight of one of the fore braces and there made fast.

Poor Sullivan was taken aft to receive treatment at the hands of the "old man." I assisted. He was insensible and I know now that he looked like dying forthwith. He had quite a small flesh wound, but when I held his head for the skipper to examine the parts the sensation comes back to me now. It was that of "egg-shell crackling," just like that felt in a bone sarcoma with a thin external covering. The fact was that there had been very extensive fracturing of the occipital region, as well as a bad break of his nose. The wound was washed, a big pad of lint soaked in Friar's balsam applied and the head bandaged. In a day or two he recovered consciousness and by the time we were abreast of Fayal the boy was on his legs and about the decks. Who would have believed that he would have pulled through without apparently any grave sequelæ, but so he did?

Some years later, after "swallowing the anchor" and qualifying as a medical man, I found myself Surgeon-Superintendent of an emigrant ship. We left Plymouth in early February with nearly 400 emigrants for Sydney, New South Wales. No sooner clear of the land than a hard sou'-west gale blew up in our teeth. For nine solid days we stood across the Channel, wore ship and at the end of that time Start Point was still in sight between the squalls.

You can imagine the miseries of those poor devils of emigrants. Unused to the sea, seasick, homesick, cold, wet, fearful and battened down, few aggregations of human wretchedness could be greater than was to be found during the first few weeks in the close dark 'tween decks of an outward bound emigrant ship in these days.

However, fine weather in the nor'-east trades soon put most of them on their legs and comparative cheerfulness and well-being prevailed.

But not so with one poor girl. She and her husband were particularly nice people, quiet, well behaved and good to look at. She was about six months' pregnant and never have I seen such seasickness as took hold in her case and persisted uninfluenced by the easy motion of the finer weather. She vomited from the Channel to the pitch of the Cape when we began to run down our easting. Even the temporary quiet of a few days at the Cape Verde Islands, where we put in to repair the damage done in the early part of the passage and get more water, produced little change for the better. I suppose seasickness, *plus* an unduly prolonged vomiting of pregnancy, led to her unalleviated suffering.

At last a time came when, inexperienced as I was, I felt certain unless some sudden change for the better occurred, that she would surely die of exhaustion.

After much thought I took my courage in both hands and decided to empty her uterus. We had made a long passage so far—forty days to the Line, so that the patient was now in the eighth month of pregnancy. I therefore comforted myself a little, read Playfair's "Midwifery" and passed a bougie.

Labour began in due course and so did a strong westerly gale. I had the patient in the so-called hospital, "the half-deck," where in other voyages lived the apprentices.

Water came aboard, the decks were full of it and there was often quite a lot of it inside our precious lying-in chamber. I recollect that I wore "half-boots" for the occasion. The patient, of course, we had to put in an upper bunk to keep her out of the wet. Labour pains went on and on with very little progress, but at last the cervix was fairly fully dilated. It seemed clear that if I waited till Nature completed the labour that surely her feeble vitality would have flickered out. So I made up my mind to deliver her by high forceps.

Picture the scene! A dark deck cabin, with plenty of water washing about and plenty more spurting in through the chinks at and about the weather-board of the door. A couple of dim lanterns swung from the hooks and the gloomy interior was resonant with the ceaseless thunder of the gale and the creaking of the straining ship. Outside

> Thro' scudding drifts the rainy Hyades
> Vex't the dim sea.

I removed the lee-boards of the patient's bunk, but how was I to get purchase to deliver her standing up and struggling to balance myself to the roll and pitch of the vessel? However, I put one small chest on the top of a big one as a basis for

myself and somehow or other applied the forceps and got a steady strain upon them (no axis-traction gadgets, remember). It seemed hours to me and no doubt centuries to the poor girl.

A well-meaning, ample bosomed and ignorant young woman who said "she was a bit of a nurse," and who told me in a hoarse aside as I pulled that she "knew a thing or two for she 'ad 'ad herself a love child larst year," assisted me not inefficiently, while another dame, also of experience in such matters, gave an occasional whiff of chloroform.

At last I got the head upon the perineum and waited, but the patient had no kick in her pains, so I ended her ordeal instrumentally. The child, a little mite of a girl, was taken to the married quarters, where there were several women with babies at the breast and was mothered by one of them. She lived and is alive and the mother of children of her own today.

My poor little fragile patient was in a sad state of collapse and what could one do under such circumstances? Not much indeed! However, the cook kept the galley stove going all night and so with hot bottles and hot drinks the long night wore away at last.

Her vomiting practically ceased, she retained what invalid food the "medical comforts" afforded. She even suckled this child of affliction and I landed them both alive in Sydney 126 days after leaving Plymouth.

This year I had the pleasure of getting a letter from the mother. She had seen my name "as present at a funeral" and so concluded I was still alive. She and her husband were both well and had prospered moderately and this child, born in such hard circumstances, had in due season given my patient "two grandchildren which," she said, "were the joy of her life."

One cold blowing Sunday in winter many years ago Dr. A. Grieves, then of Wahroonga, now of Sydney, asked me to come to an urgent abdominal case on one of the arms of the Hawkesbury River. It was no easy place to get at, especially on a Sunday. By train to a siding, then a long climb down a rough track to the creek on which lived the patient. I daresay a fall of over six hundred feet. I caught a train and ultimately reached the patient. He was a big fat fellow and obviously desperately ill, with "acute abdomen" writ large upon him. Apparently a perforated appendix, with general peritonitis. He was living in a house built on piles by the side of the creek. He took the anæsthetic in troublesome fashion, with many struggles and outcries, but Dr. Grieves got him quiet and I opened his abdomen in the right iliac region and found, as we expected, a gangrenous appendix and an abdomen full of fœtid pus. His condition did not encourage too meticulous a procedure. I drained the belly through three other suitably placed openings and got him off a very shaky table as soon as possible.

For us to get home was difficult and meant a long delay to catch a late afternoon train, so we sailed a skiff, one of several owned by the patient, to a place near the head of the creek. There we got a buggy to take us to the railway and so home to Sydney by nightfall, very tired and feeling sure that I had seen the last of the "lake-dweller" on that creek of the Hawkesbury.

I did not hear for some time how he had fared. As I am no reader of newspapers any obituary notice would escape me. Later, however, Dr. Grieves told me the sequel.

During the night after the operation he became wildly delirious, flung the nurse to the winds or more correctly to the waters, tore off his night clothes and dressings and escaped into the bush at the side of the creek. He then climbed to the top, to the railway siding, and made for the cottage of the local "school-maam" and rattled at her door and windows. This poor dame must have got a nice shock in seeing a huge man, stark naked, dancing about in the moonlight with four drainage tubes weeping pus from his abdominal cavity. The shouts of the patient and the cries of the school mistress awoke a few railway men and after a struggle the wild man was secured, covered up and put to bed. He never looked back and made a quite rapid and uneventful recovery; some people are invulnerable—no, unkillable—and he was one of them, but I think the school mistress must have had the fright of her life.

A Quaint Doctor and a Couple of Too Curious Cats.

Dog does not eat dog, nor do doctors
Charge one another for professional services.

I have in my life treated quite a number of warm blooded animals besides man. Horses, cattle, sheep, dogs and birds I have dealt with in various places, but only a couple of times did I minister to cats. I shall tell you about them.

In the first year of practice I had a quaint Irishman as a professional neighbour whose sayings and doings were a joy to me and other frivolous persons of that remote age. One night about 2 a.m. I heard a loud ringing at my bell. With cold feet and a hot heart I went downstairs to find the cause. It was my doctor friend in a specially voluble mood.

"Come out with me now at once," said he. "'Tis a very urgent case, my wife's cat has swallowed a fish-hook."

"I will," said I. "Wait you till I get some clothes on me."

On reaching his house I was conducted to the bedroom of the pair, which was in a rather dishevelled state. His wife, trepidant and tearful, sat on the edge of the bed in clothing appropriate to that place, while a large tom cat cut capers about the room with a fathom of fishing line hanging out of his mouth.

I took in the situation and laughed inwardly.

"Now Doctor!" said my colleague, "there's your patient and how will ye be after getting him pacified?"

"Wait you now," said I, falling into my colleague's vernacular, "and we'll manage all right."

"Mrs. X, have you such a thing as an empty sugar bag?"

"I have now."

"A fifty or a seventy pound bag?"

"A fifty pound, Doctor."

"Go you, please, and get it."

"I will."

When it was brought I asked for a scissors and cut off one corner.

"Now, Doctor," said I, "catch your Tom."

"I will."

I then got the fishing line and rove it through the bag, bringing the end out through the hole in the corner. With the lady holding the bag open and her husband yarding the cat into it, and I applying *vis a fronte* by means of the fishing line, we got the cat into the bag with his open mouth jammed into the hole. He was fixed good and fast. A hunt in the surgery produced a forceps, scissors and a knife, all of ancient make and long disuse. A snip or two and outcame the hook which had not been swallowed. Joy reigned and whisky was mentioned. I fancy I refused it! I advised bed for the lady for fear of cold and with expressions of mutual esteem I went downstairs.

At the front door the doctor said: "And now, my friend, about your fee?" (he said "fey"). "Name it."

I replied that it was a compliment to attend the family of a colleague and moreover "dog didn't eat dog" and so to bed.

It was pleasant to be young and have a sense of fun; the former state slips away, but the latter I hope happily remains.

Students in their final year have, as you all well remember, to attend a certain number of midwifery cases. In my day in Edinburgh we had to conduct six labours personally. One such fell to my lot. It took place down a dark area tenement in Stockbridge. The labour conducted itself with an old Howdie woman giving encouragement at appropriate intervals. At each bad pain the girl would call out: "Eh, me! Eh, me! but he would take no denial." I admit I was so wholesomely innocent that I failed to catch her meaning, but the old woman's remark, after hearing these pious ejaculations repeated, put me wise.

"Hud yer whest, wumman; hud her whest and bear doon!" said she, as she pressed her fists into the patient's lumbar region. "Yer mon ask'it nae mair than his richts and it was, nae doot, yer ain wush to accommodate him."

The baby was born, the placenta followed in due course and was placed in that receptacle so often found beneath beds.

All was well; I sat by the bed gently kneading the uterus and waiting for the "cricket-ball feeling so comforting to the hand of the *accoucheur*." I quote from Swayne's aphorisms.

It arrived and we all drank strong tea. I thought of going home to my lodgings covered with glory and domestic parasites, but it was not to be, not just yet.

At that moment a horrible animal screech and a crashing of crockery came from beneath the bed and out jumped a fine big cat anchored to the afterbirth by the umbilical cord, the end of which it had partially swallowed and got its teeth stuck in the Whartonian jelly of that structure.

The terrified cat rushed one way and the swing of the placenta turned her over in another direction; pandemonium raged in the little room—caterwauling from the cat, shrieks from the patient and curses from the wise woman. I gave active chase; I laugh now when I think of the scene. The cat was caught and the cord divided at her lips. I left her to deal with what was left inside, a thing she was well able to do, for this was no errant roof-walking Tom, but a respectably married tabby with a fair sized family at the fireside and one who must have had personal experience of the separation of her kittens from the secundines by her own teeth.

À propos of such division I once operated upon a strange old woman whose early years were passed in an outback station where blacks and bushrangers were still common objects of the untamed wilderness. The blacks were dangerous and troublesome and her stockman husband and his boss with others had to go away on a punitive expedition. She was the only woman on this lonely station and was just on term. Unwillingly her husband left her, locked up in the most secure hut in the homestead. She had food of sorts and a pitcher of water. The terror of her situation started labour and all through the night without light, warmth or human companionship she fought her hour of travail in silence and fear and her fear was not groundless, for she heard the stealthy feet of aboriginals about her little citadel of safety. What courage she had! The child was born and she lay on some sacks. I asked her what she did when the after-birth came. Poor girl, she thought at first it was a second child. However, instinct prompted her to do the right thing and she chewed through the umbilical cord.

Late in the afternoon of the following day the men returned and she was found not greatly the worse of an experience so horrible.

This woman could neither read nor write, but she had a business head and a flair for marriage, for she not only made quite a sufficient fortune, but wedded four husbands before she died at a ripe age.

Concerning a Man who Carried about with him an Account of his own Wrong Doing.

Every now and then one hears stories of people who, having done some serious wrong, carry evidence of their lapse about with them till they die. Such an instance I met with a long time ago.

One day the wife of a well-known University professor came to ask me to help her regarding a man who had arrived from home with an introduction from a prominent English politician. This man, she said, was well bred, well educated and really quite a charming personality. But he was odd, his

manner was not quite normal, his conversation a little inconsequent and his gait uncertain. Indeed, the lady was inclined to think that he looked too kindly on the wine cup when it was red. He was tactfully sent to me for observation. The lady's appreciation of signs was correct, but her deduction was faulty. He presented all the abnormalities she had mentioned, but examination showed defective vision, slight articular difficulties and a bad headache. The ophthalmoscope revealed optic neuritis. He had neither renal disease, anæmia nor lead poisoning nor did he vomit. I came to the conclusion that he had organic disease, a cerebral tumour.

The professor's wife and I took crafty counsel and decided that we would try to ship him back to England.

A fine old motherly passenger sailing ship, the *Parramatta,* was about to leave Sydney in a short time and we made arrangements for him to sail in her.

The *Parramatta* was and still remains my ideal of a fine passenger sailing ship. How I loved looking at her! The direct descendant of John Company's East Indiamen.

We told the ship's agents and I think that fine sailor, Captain Goddard, who commanded her, that the man was not in good health, but we did not enlarge on the nature of his malady.

They agreed to take him subject to the concurrence of the ship's surgeon. In those days sailing ships carrying passengers, advertised, as an attraction, that they carried a cow, a stewardess and a surgeon and the young surgeon of the *Parramatta* was no fool. He was the son of a well-known doctor at home, I think, the medical adviser to Queen Victoria at Osborne. He knew his job and after examination interviewed me and put it plainly: did I think the man had a cerebral tumour? I admitted I did. He then said that he would veto taking such a case on board. He was perfectly right in this action, so any hope of getting him home was put aside.

He got rapidly worse and had to be put into a hospital, where soon after he died. The lesion was a tumour. It was before the work of Hughlings Jackson, Ferrier and Horsley had made the localization and treatment of brain tumours the common knowledge of those who kept themselves abreast of the literature of their profession. Then and of course still to a less extent iodides and mercury were and are given. If the lesion is syphilitic perhaps some good is done. If it was non-specific, then there was practically no treatment.

Decompression operations had not then been even imagined. This poor chap raced to his end and happily soon died in an apoplectiform seizure. When his effects were gone through, a packet of loosely tied papers lay at the bottom of his portmanteau and his life's story was contained in them. Of good social standing and a creditable university record, he had entered the colonial service and soon rose to the position of Colonial Secretary in one of our Crown colonies. Here he did exceptionally well and his conduct and character promised speedy promotion. But financial difficulties overtook him, for his outran the constable; opportunity tempted to replenish his exchequer. He fell and was found out. A trial, exposure and punishment quickly followed. He did time, was early released for good behaviour and was sent out to Australia to make a fresh start. A sad ending to a fine career.

Possibly, as Dr. Kelly suggested, the beginnings of his cerebral lesions may have been the determining factor in causing his loss of higher control and so falling into the line of least resistance for wrong doing.

A Death Bed Recognition.

I have read stories in which death bed recognitions were the dramatic points of the tale. Such an experience came to me in the course of practice. One Anniversary Day, many years ago, I was out sailing in a little yacht I then owned. My son, then a small boy, and a friend were my crew. It blew hard and there were lots of capsizes among the small fry. I came up with one, where another fourteen footer was giving assistance. The skipper of the rescuing boat, a well-known successful racer, said to me: "Doctor, you take this chap, he looks like 'a stiff' and is hard for me to stow here, I'll manage the rest of the crowd."

His boat was, of course, out of the race and very deep with a double crew.

We got the senseless form of the man on board my boat with some difficulty and stood over to Mosman's Bay where I knew I could get him on a steamer going to Sydney. I then busied myself with the usual means of restoring the apparently drowned. I got him breathing in a little while and then poured a teaspoonful of methylated spirits down his throat (the only stimulant on board) with quite encouraging results and put what clothes I could on his cold body.

As we got close in to the northern shore a man in a skiff came out in response to our signals. He was stone deaf, but understood my gestures. After more difficulties with the insensible patient we got him into the skiff and rowed to the point where the steamer touched and it was moderately smooth water. On the shore stood a very well dressed girl, very good looking, with Titian red hair. I daresay I looked the "compleat ruffian" and my manner was not of the best bedside brand at the moment. I called to her to help us, but she made no sign. "You see our difficulty," said I. "Come and lend a hand, for goodness sake." All she replied was: "How dare you insult me?" She gave us a comprehensive stare of outraged dignity and fled.

I had just time to tell her what I thought of her before she got out of earshot. How disgusted we felt at such an exhibition of human selfishness! At the most she could only have wet her fine frock.

Well, we got the poor devil on board a Mosman steamer and laid him on the warm iron grating

above the engines. More human indifference, for no one offered anything to cover him. So I said: "If no one has the decency to cover him, I'll take off my shirt!" This stirred them up, and a kind woman who apparently knew me put her shawl over his cold body. He was taken to the Sydney Hospital and recovered. He was the only son of his mother and she was a widow and actually wrote me a letter of thanks. Far otherwise was the case of another man I picked up on another occasion who was nearly as far gone. I gave him a Shetland sweater to cover his nakedness, but the child of Belial, I am sorry to record, never returned it.

More than a year passed away and one Saturday just as I was starting for Mittagong, a doctor friend asked me to come at once and see a patient, an urgent case of probable ruptured gastric ulcer, with a view to operation.

Unwillingly I went. The doctor told me that she was a girl of twenty-three, of many attractions, that she had had for some time active signs of a gastric ulcer and that he and another medical man had urged rest and strict treatment. In spite of this advice she had the previous night gone to a ball and danced till the small hours. Acute pain and collapse followed and that it looked as if she would die without any improvement of her condition.

I went upstairs and there lying in her bed was the very girl I had last seen running away from her plain duty at the point of Mosman's Bay. The recognition was instant and mutual.

I took her hand, cold already with the imminence of death; with the other, she motioned me to bend low and into my ear she whispered:

"Forgive me—I was a coward—and a miserable selfish beast, but I had such a nice new frock."

That night she died, poor thing!

Of Consultations with Insane or Drunken Doctors.

Insanity and drunkenness in the laity is bad enough, heaven knows, but in a doctor and that doctor still practising his profession it is still worse, as indeed it must be wherever the insane or alcoholic person is in a position of responsibility. Several such instances have come into my experience.

In a certain large town which possessed a good hospital and a specially competent staff, there practised a doctor, learned, cultured and capable, but alas, in his sixties, heredity overtook him and he showed signs of mental aberration. He remained in practice, unconscious of his misfortune. A patient came under his care, similarly afflicted. The doctor diagnosed a cerebral tumour and determined to open the cranium and remove the tumour which he believed lay within.

The patient was placed in a public hospital where the sick have the inestimable advantage of their cases being known to a number of skilled observers who could judge of the correctness of their colleague's diagnosis and the propriety of his proposed treatment. His colleagues, of course, saw that the case was quite unsuitable for surgical treatment. But it was a difficult and delicate matter to withstand the insistance of the doyen of the staff to operate. At last a compromise was effected without publicity or hurting their senior's feelings. It was agreed to send the patient to Sydney under my care and a private letter from one of the staff put me wise to the difficulties of the situation. In due course the patient came to my rooms accompanied by his unfortunate medical adviser.

Copious clinical notes were produced, written in a neat old-world hand, meticulously learned and irrelevant. To read them provoked both laughter and tears, the latter most so, for it was indeed pathetic to trace in these papers the failure of a fine intellect. To sum up: the patient was frankly insane and so was his doctor!

I did my best to satisfy the latter that his patient's case would be fully examined with a view to the operation which he so greatly urged. I sent the patient into hospital, from which in a few days he was transferred to an asylum. As for the poor doctor, with no small difficulty to arrange ways and means, he also found himself under restraint where he remained till he died.

It was a difficult and painful case for all concerned, but at any rate the best solution to the trouble was effected without scandal or publicity.

Another example which also might have led to a fatal result, came across me. I was asked to see a young married woman who had been very ill for several weeks. I knew some of her family quite well and gathered that they were very dissatisfied with the doctor in charge. This man at once struck me as odd and inconsequent, he talked foolishly and I thought he must be very ignorant and incapable. The patient had a history strongly suggestive of a miscarriage six or seven weeks earlier, which apparently did not strike her doctor as of possible relevance in any way to her present parlous state.

The girl was running a high up and down temperature, had rigors at intervals, sweated profusely and had a tense tender abdomen. The doctor regarded the case as one of enteric fever—apparently basing his diagnosis on what he called "typhoidy stools." A vaginal examination, which he deprecated as needless, convinced me that she had a large pelvic abscess. As I talked matters over with him his conversation and appreciation of the facts of the case were so bizarre that I was certain he was mentally deranged and a menace to his patient. I got him out of the dining-room on some pretext and at once the patient's sister came in "with furtive looks and cheeks of flame."

"Doctor," she exclaimed, "tell me straight, is that fool killing my sister?"

I hated doing what I did, but I was sure I was justified, so I replied:

"Say nothing. Dismiss this man at once. Send for Dr. ——— and he will operate and probably save your sister's life. She has no typhoid fever, but a huge internal abscess."

I got quickly out of the house and telephoned to the doctor I had recommended should be sent for.

The patient was operated upon without delay and recovered, while the doctor, poor chap, was within a week sent to a hospital for the insane where he fortunately died. I learned from the men practising in his district that they had suspected for some weeks before that he was unfit to exercise his profession.

As a rule the purely drunken doctor is easier to cope with than the insane, for sobriety and repentance follow and one as a rule can prevent accidents. Once I met two doctors, one slightly sane, the other slightly sober. They hated each other and one of them hated me. It was a difficult situation, for they had fallen out before my arrival. One desired to give quite outrageous doses of a very powerful drug, while the other was equally insistent to administer alcohol in heroic quantities.

One accused the other "of wishing to send the patient before his Maker with his back teeth under whisky"; the other retorted that his enemy "intended to blow up the case with dynamite." It was a quaint scene, but I felt I had the matter well in hand as I had been specially got "to see that the patient had fair play." It was a time for the exercise of "sweet language and a fair speaking tongue" and so a compromise was effected by persuading them to give reasonable doses of their favourite medicines and no actual harm was done.

An elderly doctor many years ago told me that at one time he was in practice in a town with two *confrères,* both wild fellows, both inclined to drink, but otherwise merry, kindly souls.

An amputation of the thigh was to be undertaken in the little local hospital. My old friend gave chloroform, the senior of the two others was to operate, the junior man to assist. Both of them, in the suggestive language of our country, had "had a few." The senior's first incision suggested that the flaps were going to be cut convexity upwards. At once his assistant screamed out: "Ye bloody murtherer, ye're cutting the flaps the wrong way, and it's amputating the body from the legs, ye are, not the leg from the body."

A suitable reply in kind followed. The altercation waxed, the instruments were dropped and both men rushed outside and fought, while the unfortunate anæsthetist kept the patient just under till they returned, dishevelled, bruised, but somewhat chastened. Without comment the operation was resumed on better lines and no very real harm was done. Surely such an event could not happen anywhere in the Australia of today.

Some "drunks" are unconsciously amusing. I once went to see an intemperate veterinary surgeon of a happily extinct type. He had alcoholic cirrhosis of the liver with gross ascites and he still kept taking "hairs of the dog that bit him." His doctor wished to tap him. At the bedside as the trochar entered his abdomen, he bitterly complained of the fate which affected him in such a painful way. I suggested that after all he ought to blame the alcohol and not fat. Said he: "Don't you be too 'ard on a man. It's just the same in your business as it is in my purfession. What 'appens after I've given my advice to a toff? 'E says, 'Doctor, what'll ye 'ave,' and we 'as a spot. So with your job, just as ye're leavin' the lydy's bedroom she says, 'Doc! there's glasses in the dining-room' and ye 'as one."

In fact it was a case of what an alcoholic commercial traveller told me he was suffering from, "intermittent business nobblerization." A new nomenclature, but it tells the ætiology quite well.

But drunken folk do usually excuse their failing in some way or other. I remember a drunken doctor was doing something especially out of place and on my checking him in very shame at his foolishness, he replied: "Don't you trouble about me; what I did was only 'the bright coruscation of an evanescent genius'."

Occasional Risks of Bodily Harm run by Doctors in Their Professional Duty.

Every now and then one hears of nurses and doctors running risks or receiving bodily harm in circumstances incident to their professional work. Twice in my life has such a risk fallen to me.

Years ago there practised in New South Wales a very clever man who for a long period pursued quite a reputable way of life and work, but when no longer young he seemed to lose control of his better nature, took to drink and women and generally made a mess of things. One woman with whom he was specially associated, came under my care and required a serious abdominal operation. This man was assiduous in his visits to her, but his conversation to me and other strangers regarding her and his relations with her was of so indelicate a character and his behaviour generally so abnormal and degenerate that I had no doubt that he was not in his right mind. No wonder then that he wrecked his practice and his home. One day in the middle of these troubles, a medical man, an old friend of this doctor, came to me and asked me, as I was in a good position to gauge his mental aberration, if I would, for the man's own sake and that of his family, join him in certifying him for asylum treatment. I bitterly disliked the job, for I had had no dealings with such cases for a long time and I had no special reason to associate myself in that most thankless and risky of medical responsibilities, the signing of a lunacy certificate. However, I allowed myself to do it. It would take too long and not be wise to describe the curious subterfuge by which the actual placing him in the asylum was effected, a queer story not without risk to those who did it, but not without its funny side. Be that as it may, the deed was done somehow and he was put out of the way of doing further mischief to himself or his family. Months passed and he recovered sufficiently to be discharged. His practice had been dispersed and his home broken up and he was at a loose end. I heard that he proposed prosecuting me in common with the other doctor for wrongful certification and further that he intended to pay me out corporeally for my share in his ruin. As to the first threat I took advice and

found that the authorities were satisfied that we had done the right thing. As for the second, my small son presented me with a stout club which he called a "battle stick," to keep handy in my consulting room in the event of an attack. Weeks passed; I thought the "sun had gone down upon his wrath" and that I should hear no more of the affair. One afternoon, however, as I sat in the receipt of custom in my consulting room the door opened and this man was shown in. He promptly locked the door and I reached for my weapon. He came towards me

> Frowning, and his look denounced
> Desperate revenge and battle dangerous.

"You and Dr. Z.," said he, "conspired to confine me and you have wrecked my life. Strange that some folks have nothing but prosperity and others like myself only ill fortune. But, anyway, I'll take it out of you now."

The situation was difficult and full of many unpleasant possibilities both bodily and spiritually. It brooked no delay. The poor chap looked ugly and meant mischief. I saw no lethal weapon and I dropped my own. He went for me and I met his onslaught with equal fervour. We closed and swayed together. I got my thumbs on to his two carotids and in spite of struggles and some hurts I kept them there till anæmia of his brain loosened his clutch and gradually the silent struggle lessened and we fell to the floor, I on top. When he came to I read him a lecture on the rights and wrongs of the case and he departed quietly, but I feared still unforgiving. It was a nasty experience and I was very afraid he might bite me. After a long interval, once again he came into my room, chastened and wholly sane. He held out his hand and I took it.

"I think differently now of the past," he said, "and I realize that after all you two men did the right thing." He then told me that he had fallen on evil days, was almost penniless and without employment. Having satisfied myself of his sanity and change of heart, I was able happily to obtain a situation for him which, at any rate, kept him from want. He died years ago with, I heard, no return of mental trouble.

This next little event, like others I tell of, took place in my early days, in the first strenuous years of general practice when all sorts of cases were dealt with.

One night, Dr. Shewen, a really learned and able man of great experience, sent me a message to meet him in a poor place in the heart of most squalid Woolloomooloo. Guided by his messenger I went. The patient, a young woman, was in labour with her first child. Obstetrically it was a very difficult case and now I suppose it would have been sent into a maternity hospital and Cæsarean section performed. But in those days it was very rarely done and we did not even discuss it. Dr. Shewen's opinion, which counted much, was that destruction of the child would be required and my own view which counted little, was also that a living child could not be born.

Dr. Shewen said: "You go back and bring all the necessary instruments and we will see what we can do."

On my return with a bag of instruments among which was that fearsome weapon, a cephalotribe, I had almost reached the house when suddenly two men jumped out of hiding and bailed me up. I dashed across the lane to where a lamp was burning in a bracket on the wall and stood under it. I faced the two footpads, dropped the bag and in a flash got out one of the blades of the cephalotribe.

"What's your game?" said I.

"You turn out your pockets and that bag or you'll get more than you want."

They saw the queer looking instrument in my hand and hesitated to rush me. I said: "I'm a doctor going to a case and I'm no greater coward than the next man, but you'll down me only after this has given you what for."

I know my heart was thumping, but in those days I was as strong as a pony and did not consciously know that I had sciatic nerves or any other organ, and so I determined I'd fight. I certainly also embellished my discourse with an embroidery all their own which I hope they appreciated. After a few seconds' hesitation and a good long look at that sinister piece of steel in my hand, these two beauties, with a few valedictory curses, melted into the night and were gone. I kept the obstetric implement ready in case of accidents, but reached the house of travail without further interference.

Of Professional Frights and One's Tightest Corner.

Sometimes I have heard medical men discuss the greatest fright they ever got or the tightest corner they had met in their professional career.

Regarding the first, I found the following incident the most upsetting, especially as I blamed myself directly for it.

In the days of general practice I attended the family of a butcher who practised his somewhat distressing occupation in a wooden tenement, remarkable even in those days for dirt, flies, smell and general insanitariness. He and his small family lived above the shop in a large attic, access to which was gained by a wooden ladder like the companion of a ship. One day, it was his wife who was ill, I climbed upstairs into the dark smelly room and found his wife, a cheery looking colleen, in bed with abdominal pain. By the fire sat her mother-in-law, a dirty old crone with a good moustache and smoking a short sooty clay. Two really happy, untidy children played on the grubby floor.

"Dochter," said the old woman, "the gurrl has a lump in her belly and its sore, it is."

I examined the patient and sure enough there was a tender tense swelling just below the liver. It was pretty much what the old Fife doctor called "a semi-globose intumescence." I palpated it—I fear too firmly, for as I did so I had the distinct sensation that it had burst. I felt pretty alarmed. The old woman who was watching closely, said:

"What's the matter?" I blurted out: "I believe the lump has burst."

"A good job too," said her mother-in-law. "Don't worry yourself now, it was just what I said, just one of them bluidy wind-balls."

This diagnosis did not reassure me, for I thought it was not the gall bladder, but an hydatid cyst. I at once begged them to let me send her into hospital and allow me to open her. They would not hear of it and so I left the patient with fear of all sorts of evil sequelæ in my heart. She got a local peritonitis, but soon got well, apparently, anyway. What the ultimate result was I never knew, for shortly after I went to England and on my return found that a case of plague had occurred in this place and that it had been condemned and pulled down in my absence, and quite time it was.

Of many tight corners in which I have been, I always regard the following as that which worried me most. I had read, not once only, Syme's account of his operation on a case of wound of the carotid and it sounded very difficult and dangerous, but later I rather thought it was not really so very difficult from my own experience in a somewhat similar case where a jealous barmaid had stabbed her young man in the neck and wounded the internal carotid artery; when I dealt with the patient there was a large pulsating tumour with the skin tightly stretched over the region of the stab wound. With skilled assistance this case did not present any very great difficulties.

My greatest emergency occurred within the abdominal cavity. A very able doctor sent me from the country a huge woman. She must have weighed seventeen stone, with a large tumour of the left side of the abdomen. His diagnosis and mine coincided—a malignant growth of the left kidney with probable hæmorrhage into its substance, for while in hospital she got acute pain with sudden increase in size and tenseness of the mass. I made a long lateral incision and opened the abdominal cavity and found the tumour pressing forwards right against the anterior abdominal wall. The colon was pushed outwards and jammed against the left parietes, while the mass presented to the right of the larger bowel through the mesocolon which was tightly stretched over it with big vessels flattened out on its surface. Here I made a mistake. Instead of incising the peritoneum to the outside of the bowel and pushing it and its mesocolon to the right and so gaining access to the huge kidney, for kidney it was, I took the line of apparent least resistance, divided the presenting layer of mesocolon, tied a few obvious vessels and began to free the mass through the aperture. It shelled out of its bed with ease and even its upper pole was separated with quite surprisingly little difficulty. I thought I was doing very well and cleared the short thick pedicle and prepared to deal with it. But pride goes before a fall. As the growth was freed and rose up above the edges of the incision, by some haste and inadvertence these edges were depressed and slipped with a jerk behind the tumour and so an undue strain fell on the big short pedicle. It tore, and out jumped the great mass like a gigantic pip out of its bed. A gush of blood followed which literally swamped everything. The anæsthetist quietly said: "I'm afraid the aorta must be torn." The crimson flood almost looked as if it were so, as it welled up from the depths of this huge woman's abdomen.

I took a big swab in one hand and plunged my arm up to the elbow into the cavity and in its depths sought out the region of the pedicle where I could feel the jetting of blood. By pressure I lessened its flow and with a very long forceps in my other hand I groped for the place of bleeding. By great good luck I got them clamped on the right region and the torrent diminished. Two other forceps were new applied on each side of the first, bleeding ceased and I was able to clean out the clots and inspect the region. It was almost dry. I made a counter opening in the back and left the three long forceps in the wound and got her back to bed as soon as possible, exsanguined but alive.

The next day she really was wonderfully well. After fifty hours I cautiously removed the forceps and no bleeding followed. I began to take courage; on the fourth day, however, when I dressed her, I smelt fæces and soon saw some.

The damage to the mesocolon from my unwise entrance through that structure led to gangrene of the colon and after a distressful week she died. This, then, I consider my tightest corner. I got out of the acute emergency creditably, for if I lost my way in the first instance, at least I did not lose my head in dealing with it. None the less, I can never forgive myself for not realizing that in such a case, however tempting a short cut may look, the proper road here was the longer and safer round the outside of the bowel and its displacement towards the middle line.

When this affair took place I was not very old and I doubt if I had removed a kidney six times by the abdominal route, but all the same I ought to have known better. I may, however, even now console myself in that so great a surgeon as the late Mr. Barker at one time published a paper dealing with cases like mine by a median incision, pushing the colon to the outside and opening the mesocolon through its presenting surface as I did in this unfortunate instance.

A Warm Deed in a Cold World.

In this difficult world human kindness is no small help in making rough places smooth and sweetening one's outlook on life. I suppose all of us have at times experienced kindness and gratitude, often when least expected. An offset, indeed, to the more common opposite conditions.

Here is a trifling instance of kind thought, which, after ten years, leaves a pleasant savour in my memory.

One very cold night in France, just before the Armistice, I came to sleep in a camp as the guest of an Australian unit. I was shown to the tent

wherein I was to sleep and where my small kit had been placed. Later on going to bed I heard someone moving in the dark inside. I called out: "Who is that inside?" A voice replied: "It's all right, Doctor! You don't know me, but I heard you were sleeping here tonight, and I remember you all right." I entered the tent and found a long Australian smoothing my blankets. "What are you doing?" said I. "Oh," replied he, "do ye mind the time you come up to ——— to operate on my dad? Well, it was me who drove you from the railway to our place. Lord, it was cold and 'ow you did curse it! Well, I 'eard you was 'ere and I says I'll make his ——— bed warm anyway and that's why I'm 'ere."

The kind chap remembered that I was stiff with cold on that long perishing drive and he had got two or three stone bottles filled with hot water and put them inside my blankets. I was awfully touched by this act of kindness. Its memory blots out a dozen instances of human selfishness to which every one of us is prone.

On Death Beds and Last Utterances of the Dying.

I suppose we have all seen many death beds. They are, as a rule, fairly commonplace events, far different from the dramatic scenes described by novelists and certain religious writers. Many people die as indifferently as they were born, and it is as well that it should be so.

I think every doctor would do well to read the thoughts of two wise men on death—Marcus Aurelius and our own Lord Bacon.

> Men fear death as children fear to go into the dark and, as that natural fear in children is increased with tales, so is the other.

In many religious books of past ages and for all I know still in some of those in these days of knowledge and scepticism—

> You shall read of mortification . . . . what the pain is if a man have but his fingers pressed or tortured; and thereby imagine what the pains of death are, when the whole body is corrupted and destroyed, when many times death passeth with less pain than the torture of a limb, for the most vital parts are not the quickest of sense. . . . Groans and convulsions and a discoloured face and friends weeping, and blacks, and obsequies and the like show Death terrible.

And Bacon, who wrote the words I have just quoted, towards the end of his essay sums up in these true words that:

> It is as natural to die as to be born and to a little infant perhaps the one is as painful as the other.

Rarely indeed have I seen any violent emotion shown in the last pitiful hours of existence. Physical weakness has mercifully numbed the ability to feel and remember. Some, most happy, die in their sleep, nor are they who die suddenly always to be pitied. In most cases no great harm results from a death without antecedent suffering and delay.

Bacon, in another essay, says that "wife and children mitigate the remembrance of Death."

To me, this is a hard saying, for it seems to many of us that the possession of hostages to fortune, if they have been a joy and a support in life, rather increase our desire not to leave them. So, also, I imagine are high health, ignorance of pain and worldly prosperity. Ill-health, pain, shame, bereavement, loss of fortune and loneliness, on the other hand, make men more often weary of life and ready to meet death with indifference and fortitude.

Looking back through a long professional life I have the clear impression that some races and the adherents of certain creeds show special dislike to death, while others seem stolidly indifferent or are more courageous and resigned.

The Chinese, for instance, at least the Chinese I know in Australia, seem to die, even as the beasts perish and make no sign, though they are curiously solicitous as to the disposal of their bodies.

Jews, Roman Catholics and those professing some of the more extreme forms of evangelicanism, show on the other hand in very many instances quite a remarkable distaste to dying. The Jews, perhaps because being a specially clever race, with great commercial ability in most of them, succeed in life and find themselves generally particularly comfortable in this material world of time and sense and so are in no haste to "go hence and be no more seen."

As regards the other two classes I have mentioned, their making so big an affair over death has always struck me as somewhat illogical, for they each in their own way have told us that they specially hold the one "evangel of authentic hope" and that their future, a glorious one, is assured and anxiously awaited. Why then are they so coy to the summons which Azrael brings to us all? But these are difficult matters to understand and I am no theologian.

Much talk and some little stress is laid by such people on death bed utterances and the frame of mind in which the dying quit this life. As if indeed their powers of cerebration were at their normal, which they very often are not, but rather

> When the will has forgotten the life long aim
> And the mind can only disgrace its fame
> And a man is uncertain of his own name,

is I think hardly the time to take too seriously the last thoughts and words of the moribund. Even suppose a man's mentality was normal in these last moments, what avail are pious thoughts or words on the life which is just about to end or on the future, that unknown sea on which we believe he is about to embark?

For my part it seems more true that as a man lived, so shall be die. If he did evil, a few admirable thoughts or words will scarcely undo all the evil he may have done or open the eyelids of the heavenly morn, to deserve which he apparently did so little. But such speculations are more suitable to a specialist in theology and are beyond his brother doctor of things medical.

Yet apart from such deep questions of faith and belief, there is a curious interest in the recorded

last words of dying people, especially, of course, in the case of the famous folk of history.

They are not as a rule significant of the utterer's experience of this world or his vision of the next.

Lord Byron laid down his wayward life with the simple words, "I must sleep now!"

George Washington, ended his career with "It is well" upon his lips.

Sir John Moore died thinking of the woman he loved in vain, for he turned to her brother with a message to her: "Stanhope, remember me to your sister!"

Poor Oliver Goldsmith apparently died with an unquiet mind. His doctor, after feeling his rapid pulse, asked him: "Is your mind at ease?" and Goldsmith's sad reply was: "No, it is not."

Columbus and Pizarro both died with the passionate faith of their time in their hearts and minds, Columbus repeating: *"In manus tuas, Domine, commendo spiritum meum."*

While the blood guilty Pizarro, bleeding from the stabs of his assassins, traced a cross with his finger on the bloody floor, bent his head to kiss it and exclaimed: "Jesu!" Goethe ejaculated: "More light," and Charles Darwin died with this sentence on his lips; "I am not in the least afraid to die."

Charles II in a spasm of belated thought for others, asked his equally selfish, but less agreeable brother "not to let poor Nelly starve."

The Earl of Chesterfield, polite to the last, said: "Give Dayrolles a chair."

William Hunter, the brother of the still more famous John, remarked: "If I had strength enough to hold a pen I would write how easy and pleasant a thing it is to die."

Coming to our own times I dare say we have each a memory of some simple farewell. Cecil Rhodes's final words, as he breathed his last, in that small cottage at Houtman's Bay, which I have twice visited even as a shrine, were: "So much to do, so little done."

I remember sitting by the death bed of one of the greatest of Australian judges, a man of wit, learning and goodness. His release from the burden of years and difficult breathing came slowly. Turning his sweet old face to me he whispered: "My boy, this is getting beyond a joke" and so died.

I like too to remember that one of my own nearest relatives spent his last breath in a characteristic way, for he falteringly repeated the words from the chorus at the end of Milton's "Samson Agonistes," one of his favourite poems. Many of you may know it. Resignation, courage and hope are all expressed in these last lines, beginning with

> All is best, though oft in doubt

and ending

> With peace and consolation has dismissed
> And calm of mind all passion spent.

Once only have I witnessed abject terror of death. It was in the person of a woman, over thirty, who had earned her living by literary work of a sort, of a baser sort. She wrote letters on social affairs to various periodicals. Week after week she poured out a column of gossip, small scandal and nasty smart vulgar sayings, always outside the law of libel, but full of sting and malice. Just hired vitriol which sometimes must have burned deep into many quite decent people. I must admit that I had little pity for her as she lay dying, full of fear for herself, but forgetful of a hundred spiteful darts she was leaving behind.

Many women have I seen die, usually bravely, often with their thoughts centred on their husbands or children.

Men, too, either said nothing or spoke to their families about how they were to manage things.

I recollect one fine fellow saying to his children: "Stick together."

One brave little soul whose "sun went down while it was yet day," whispered to me: "Rotten luck, but it can't be helped."

Unless we can be of some use in giving actual relief to suffering, I think the doctor is better away from the bedside of the dying. Matthew Arnold evidently thought so when he wrote:

> Nor bring to see me cease to live
> Some doctor full of phrase and fame,
> To shake his sapient head
> And give the ill he cannot cure a name.

Arnold indeed wished for no presence of the clergy either, for he continues:

> Or brother doctor of the soul
> To canvass with official breath
> The future and its viewless things,
> That undiscovered mystery
> Which one who feels death's winnowing wings
> Must needs read clearer, sure, than he.

I have, however, always thought that the bedside of the dying was a most fitting field for the exercise of the sacred function of the church. After having perhaps guided the conduct of life of the poor soul about to depart, what more proper position than to be at the end to console and "point him towards the skies"? And in this attitude of mind I continued till I had been long enough in practice to have seen many people die and many clergymen at the bedside or graveside. I have altered my former views somewhat and I hate to admit it. I must confess, however, that after what I have in later years so often seen, I am forced unwillingly to think that the clergy on the whole fail not uncommonly in this portion of their high calling. Whether it be due to lack of education, tact, common sense or just simply that an unsuitable type of man enters the church, I do not know, but to many of us, not inimical to their profession, their performances are often distressing.

It may be indeed that the worldly rewards of a clerical career do not attract the best and most suitable men. In the Church of Rome this does not apply so much as in Protestant denominations. In Rome high preferment may satisfy ambition and an assured living, without domestic ties, make their future in this world fairly certain, for somehow the clergy of that Church seem able as a rule to

persuade the faithful to provide for them. Not so in many instances among the various Protestant sects. To our shame, if we believe or respect plain roast and boil religion and its practical usefulness, the clergy often are not well supported. Many of us are indifferent and break away from all church membership. "The hungry sheep look up and are not fed" is our excuse, but we do not always support the proper sort of shepherd. They seem to fail to say the right thing. In the supreme hour of departure what avails some "pullulating rites extern and vain," or prayers, official or extemporary, delivered in a professional voice or with an accent and diction which make it hard to catch the meaning of their words? Some of these prayers are noble and uplifting, others, mostly extemporaneous, are foolish and irritating and I have realized that they seemed actually at times to disturb the last moments of the dying.

Our relatives and close friends are in these cases less antipathetic and their prayers sweeter to those departing than the official supplications of priest or parson. Nor are the sermons of these inadequate clergy convincing or helpful. Anyone who in cold blood, in the silence of his own home, "listens-in" on Sundays will know what I mean. Not indeed in all instances happily, but in the majority the sermons are not fitted to raise one's opinion of the intellectual attainments or the spiritual force of the preacher. Neither the matter of the discourse nor the manner of its delivery is comforting or uplifting.

In saying what I have, I do not wish to be misunderstood and taken to have spoken disrespectfully of the clerical profession in its mission. There are good and poor doctors and there are good and inefficient parsons; only there is an undue proportion of the latter. Certainly, at the bedside, they seldom seem to be at their best. They administer "chaff well-meant for grain" and their official attitude jars. Their prayers are often gabbled and without reverence and when they seek after reverence they may and do sometimes fall into unctuousness.

The Soviet Government of Russia has "officially discouraged" in its own horrible way the belief in and exercise of religion. I can imagine nothing worse. What sort of minds or ideas of conduct of life can the rising generation of this unhappy country hope to develope? What notions of right and wrong? What ideas of self-control? Why, even here in Australia, in spite of all our advantages of settled government and the wholesome weight of public opinion, we see around us much that is base and horrible. Without any religion, conditions would be far worse. Indeed, it is not too much to say that besides religion and the policeman nothing else exists of value as a bulwark against anarchy and violence in the case of the ignorant, foolish and vicious.

If Edward Gibbon, not without religious experience of his own, for he began life as an Anglican, turned to Rome for a season, came back to Protestantism and I think ended his life a doubter, had been alive today and looked on the world, especially Russia, he would have realized the truth of his own words, that "there is much danger in exposing an old world superstition" (I had perhaps rather he had said faith) "to the contempt of the blind and fanatic multitude."

The Soviets curse and trample on religious belief, declaring it "an anodyne administered by the rich to the poor." Even if it were nothing more, with this world inhabited by people a good deal lower than the angels, it would still be a balm to the broken hearted and its teachings a noble incentive to unselfishness, high thinking and right conduct. The Soviets have given the people nothing to replace it, save the gospel of hate and wickedness. Until some new evangel shall transform our present mortal nature, let us hope that a religion which teaches the message of the Galilean in some form will abide with us.

But I digress and must make an end. For most of us then I repeat it is best for the dying to have those of their own blood about them and the words and perhaps the prayers of those most dear to them in their ears rather than those of the too often distressing official consolers when "they leave the warm precincts of the cheerful day" and set an uncompanioned course

> Through those dark gates across the wild
> Which no man knows.

Reports of Cases.

SPHENO-ETHMOIDITIS WITH FATAL COMPLICATIONS FOLLOWING INFLUENZA.

By MAURICE WHEELIHAN, M.B., Ch.M. (Sydney),
Randwick, New South Wales.

THE patient, a male, *ætatis* thirty-three, was sent to hospital by me early in June, 1928, complaining of severe pain in the frontal and occipital regions of the head, a painful right eye, a sanguino-purulent discharge from the nose, mainly from the right nostril, and intermittent vomiting associated with profound weakness and gradual pronounced loss of weight. The patient appeared much older than his years, was very wasted, sallow and cachectic and in a lethargic or semistuporous condition. There was considerable exophthalmos with intense inflammation of the right eye; the left eye was apparently unaffected. The temperature was 37·8° C. (100° F.), the pulse rate was 80 and the respirations numbered 20; these were the 8 p.m. readings on the chart.

The nasal discharge and headache dated from an influenzal attack twelve months before, the discharge being purulent, scanty and intermittent at first, gradually becoming sanguino-purulent, copious and almost constant. Some days later there was severe occipital pain and a heaviness in the frontal region of the head associated later on with pain almost constant at both sites and then becoming general all over the head which could be relieved only by morphine. The patient had never picked up after his illness twelve months before, but continued to waste. There was a continuous stream of pus down the back of the pharynx which occasioned frequent expectoration and cough. The exophthalmos had appeared apparently quite suddenly about a month before with the concomitant inflammation. The vomiting which had until a month before been occasional and mild, now became frequent, severe and approaching the projectile type as it was when I saw the patient. The lethargy also had become more profound and was rapidly becoming more so. The pains

persisted and morphine was given, but relief was only of short duration. The pulse became soft, rapid and irregular, respiration shallow and irregular and coma soon supervened.

Lumbar puncture was performed and the cerebro-spinal pressure was found to be considerably above normal, so several cubic centimetres of fluid were allowed to escape; this procedure was followed by temporary improvement and return to consciousness which persisted for an hour or so, but soon coma vigil supervened followed by profound coma with death in a few hours.

Post mortem examination was performed soon after death. The base of the skull was carefully examined, almost complete caries of the body of the sphenoid which was quite soft and friable, being revealed. The ethmoid and surrounding bone were in the same diseased condition and so friable that the bone would crumble to pieces at the slightest pressure over an area of five centimetres (two inches) square and expose foul-smelling air sinuses overflowing with a mixture of pus and blood. Widespread œdema of the brain base and orbital contents with congestion and clotting in the basal veins was evident.

This condition had been misdiagnosed, I understand, several times as a "tumour," evidently a new growth situated at the base of the cranium being meant, whereas many of such conditions are probably a virulent infective spheno-ethmoiditis.

I know of several other patients in whom I think the same condition was present, and these also were regarded as suffering from tumours.

Reviews.

A BOOK ON THE BLOOD PLASMA.

THE subject of "Blood Plasma in Health and Disease" has been well dealt with by Dr. J. W. Pickering in his work under that title.[1]

There has been an immense amount of laborious investigation entailed in the collection and summary of articles contributed from various sources for the past ten years. A rather disconcerting feature is the author's preference for long words instead of short wherever possible, thus rather interfering with the lucidity—a matter of importance as the subject itself is sufficiently difficult.

The first chapter is devoted to the recognition and isolation of the different proteins in plasma.

The second chapter deals with fibrinogen and the various means by which inception of clotting is brought about. The influence of blood platelets is stated to be that of material which reacts with prothrombin to clot fibrinogen. Products of digestion may take the place of disintegrated blood platelets in causing clotting. Intravascular injection of various substances, gelatine, peptone *et cetera*, may cause a temporary disappearance of platelets from the blood without definitely decreasing the coagulability. "There is no constant relationship between substances that inhibit the lysis of platelets and those which delay the inception of blood clotting." "In *purpura hæmorrhagica* the number of platelets in blood exhibits no relationship to its coagulability." "A fall from 300,000 to less than 10,000 may occur without any change in the speed of clotting."

In pernicious anæmia there is sometimes complete absence of platelets in cases where the blood clots rapidly when shed. "However platelets are usually an important factor." "Their partial removal from oxalated plasma of platelets delays clotting after recalcification and the addition of disintegrating platelets to such plasma hastens its coagulation."

Lysis of platelets is not the primary cause of spontaneous clotting in mammalian blood. A prior change in the plasma is essential. Saponin injected intravenously into anæsthetized cats completely disintegrates the platelets without causing intravascular clotting. If saponin is mixed with blood shed under oil on to paraffin the platelets are destroyed, but the blood remains fluid. Stirring with an oiled rod does not provoke clotting, but with a glass rod causes rapid coagulation. The electrical changes produced by the contact of blood with a surface which it wets, is sufficient to inaugurate clotting. Prothrombin consists of two different thrombins dissociated in shed blood by calcium ions.

In regard to the blood in anaphylaxis, protein sensitization causes anaphylactic shock, bronchial constriction followed by dilatation of the lungs, hypersensitiveness of smooth muscles of certain organs and hypocoagulability. In dealing with the question of anaphylactoid phenomena produced in an animal or person without preliminary sensitization, the author issues a well warranted warning against the intravascular injection of any new substance until it has been fully tested on animals. Hypocoagulation of blood favours production of anaphylactic shock. In thrombophlebitis and after severe operations serum therapy would appear to be contraindicated. The use of bovine serum is associated with less serum sickness possibly due to the use of beef as an almost universal article of diet. An important point to be noted in distinguishing anaphylactoid and anaphylactic phenomena is that the former condition is not controlled by the use of adrenalin or atropine. It has been suggested that there is a relationship between eclampsia and anaphylaxis. From an investigation of the urinary protein in conditions diagnosed as eclampsia "Hynd" suggests that the urinary albumin in that condition is lactalbumin and that some cases of eclampsia are due to an anaphylactic reaction arising from the entry of lactalbumin into the blood stream. The absence of eclampsia in most cases in which a mother does not suckle her child, is explained as due to immunization. Animals which recover from anaphylactic shock, resist intoxication by strychnine, convulsions being partly or wholly arrested.

Hanzlik (1928) maintains that the fundamental cause of anaphylactic shock is the disturbance of the physical and chemical equilibria between body fluids and cells. Increases were recorded in the albumin ratio of plasma which are reciprocal to the globulin alterations in surface tension.

The chapter on blood coagulation deals very completely with the various theories brought forward to explain these processes. The author sums up as follows: "It (plasma) is required as a cordinate complex in which the less stable fractions (prothrombin and fibrinogen) are united to the more stable fractions (serum, globulin and albumin) and are thus shielded from the disruptive action of calcium ions which is essential for the inception of blood clotting." Three modes are described by which plasma can be converted from a sol into a gel. 1. A gel can be produced by the interaction of plasma constituents without the intervention of any other material. 2. Blood platelets rapidly disintegrate whenever blood is shed. Their *débris* contains protein phosphatide complexes which flocculate the plasma to assist in the lysis of its complexes and then participate in the formation of thrombin which in turn reacts with fibrinogen and produces a gel. Those tissue juices which contain protein phospholipin complexes react similarly with plasma. 3. Tissue juices unite in varying proportions with the fibrinogen of plasma and produce gels of similar structure. It is essential that the active phosphatide is either cephalin or a body closely allied to cephalin.

Chapter XI is devoted to the arrest of hæmorrhage and shows very clearly the three methods of natural protection: (i) Contraction of vessels after the severance of the elastic tissue with consequent constriction of the arterioles —heat, cold, adrenalin and other astringents act in this way; (ii) the agglutination of blood platelets in the orifices of broken capilliaries and arterioles; (iii) the third and most important defence is the coagulation of blood in wounds by the action of thrombin and tissue coagulants. A useful method of stopping bleeding is a combination of thromboplastin and adrenalin locally at body temperature with a pack of hot sterilized plasticine over this, and a final outside bandage of asbestos cloth. Warning is given against the use of intravascular coagulants.

[1] "The Blood Plasma in Health and Disease," by J. W. Pickering, D.Sc. (London); 1928. London: William Heinemann (Medical Books) Limited. Demy 8vo., pp. 258. Price: 12s. 6d. net.

In Chapter XIV a very valuable *résumé* is given of all conditions resulting in abnormal bleeding and the means at our disposal for dealing with them.

Taken all together, the work is an exceedingly valuable contribution to our knowledge of blood plasma and will well repay careful study. Apart from the appendix on hæmostatics no benefit will accrue to the student who can give but cursory attention, as the text only becomes lucid with careful perusal.

A PIONEER OF PUBLIC HEALTH.

To most of us the name of Pettenkofer is associated with the well known test for bile in the urine. The perusal of the life of Pettenkofer which has just been written by Major Hume and published by Paul B. Hoeber of New York,[1] will demonstrate how in a long and laborious life Pettenkofer was interested in many aspects of medical science.

Pettenkofer was a pioneer in the study of hygiene, the study of epidemics, respiration, body metabolism and made many researches into food values.

Born in 1818 his early training was that of a chemist and for some years after his graduation in medicine his interests were mainly chemical and physiological.

He made many discoveries and improvements in the ventilation and heating of buildings and devised a method for the determination of carbon dioxide. His greatest work was in the study of respiration.

To him the city of München owes its pure water supply and system of garbage disposal. The first institute devoted to the study of hygiene was founded by him at München in 1879.

For many years a controversy raged as to the causation of cholera epidemics. Pettenkofer did not believe that the cholera vibrio was the sole cause and with the idea of proving his point swallowed one cubic centimetre of a fresh agar culture taken from the rice water stools of a patient dying of cholera at Hamburg. He survived this test, although at the time he was seventy-four, and when complimented on his courage remarked: "Even if I had deceived myself and the experiment endangered my life, I would have looked Death quietly in the eye. . . . I would have died in the service of Science like a soldier on the field of honour."

He visited many countries and towns investigating the causation of outbreaks of cholera and never spared himself in his thirst for the truth. Worn out by work and depressed by the thought that his mental powers were failing he ended his life in 1901 at the age of eighty-three. His influence through his many famous pupils still lives and many of his ideas are accepted at the present day without acknowledgement.

The book is illustrated with a portrait and numerous reproductions of title pages and graphs.

Analytical Department.

"MONSOL."

"MONSOL" is a new antiseptic prepared by the Mond Staffordshire Refining Company, Limited. Its chemical constitution has not been determined, although the chemists employed at the laboratories of the Brunner, Mond and Company's works spent some seven years investigating this and allied products of the distillation of coal. It was found that the oils in question resembled the phenolic group in some respects, but that they possessed characteristics differing from those of any known oils. If the chemists succeeded in determining the exact nature of the oils, they have not disclosed this knowledge. The information given to the public is of a general nature. The purified oil was found to have powerful germicidal properties and to be free from the toxic and irritant qualities of carbolic acid. It is offered to the medical profession under the name "Monsol" as a non-toxic antiseptic for internal as well as external use. It is put up in liquid, ointment and capsule forms.

Samples were submitted by THE MEDICAL JOURNAL OF AUSTRALIA to our chemist who confirmed generally the statements made by the manufacturers. He was unable to determine the exact chemical composition of "Monsol," although considerable time was devoted to the study of the preparation. He reports that it is a brownish liquid, resembling lysol. When 0·1 cubic centimetre of "Monsol" is added to a column of water, the surface tension phenomena are those of a colloidal body. On mixing and shaking, the substance emulsifies to a clean, white, milky fluid, resembling miscible carbolic acid. It forms, however, a better and more complete emulsion. It could, therefore, be taken for a phenol preparation. Analysis yielded no trace of either carbolic or cresylic acids. Further investigation showed that it is a colloidal body derived from the gasification of coal produced at a temperature below that required in the usual homologues of coal tar.

Our chemist found that it has no caustic or irritating effects when applied to the skin, but in a dilution of 1% it affects the mucous membranes and leaves a slight dryness in the throat and palate. He regards it as a colloid neutral body allied to the phenols and cresols, but differing by polymerization from crystalline carbolic acid.

The manufacturers claim that "Monsol" has a Rideal Walker coefficient of 4·5. An independent examination yielded a coefficient of 5·0.

No difficulty has been experienced in confirming the statement that it does not produce an irritant effect on the skin or mucous membranes. For local antiseptic purposes "Monsol" is used in a dilution of one part in two hundred parts. For packings, tampons and instruments stronger dilutions are recommended, up to 5%. The manufacturers advise that the capsules intended for internal use should be employed only on a doctor's prescription. It is claimed that "Monsol" in proper quantities and proper dilution is not toxic and that it is tolerated by rabbits in doses of two cubic centimetres of a 5% dilution by intravenous injection. Tests were made to control this claim. The first rabbit received intravenous injections at intervals of seven days. On the first day five cubic centimetres of a 1% dilution in water were injected. No ill effects were noted. After seven days five cubic centimetres of a 5% dilution were given, again without ill effect. After the lapse of a further seven days five cubic centimetres of a 10% dilution were injected into a vein. No toxic symptoms were noted. The rabbit died ten days later; it had been quite free of signs of poisoning on Saturday morning, but was found dead on the following Monday. Unfortunately no autopsy was made.

A second rabbit was then subjected to intravenous injections of "Monsol" diluted with saline solution. Ten cubic centimetres of a 1% dilution were injected as the first dose without harmful results. Seven days later five cubic centimetres of a 5% dilution were given and seven days later ten cubic centimetres of a 5% dilution. Lastly, an injection of ten cubic centimetres of a 10% dilution in saline solution was given. The rabbit appeared slightly dull immediately after the last injection and remained so for an hour. Later it seemed perfectly normal and has remained well for six weeks. The bacteriologist reports that from these experiments it would appear that in the amounts used when given in saline solution no toxicity resulted in rabbits. When a relatively large amount was given, slight and transitory effects were produced.

It thus appears that "Monsol" is practically non-toxic, non-irritant and yet strongly bactericidal. It can be employed as an antiseptic in surface infections, burns, abscesses, sinuses and ulcers. It is safe to administer internally, as a gargle or mouth wash or irrigation. From the information available it is anticipated that the antiseptic action should be found to be more valuable than that of any other chemical antiseptic, since relatively strong solutions can be used without fear of toxic action. This would be impossible with antiseptics, such as carbolic acid, corrosive sublimate and the like. It is stable and therefore superior to the hypochlorites.

[1] "Max Von Pettenkofer: His Theory of the Etiology of Cholera, Typhoid Fever and other Intestinal Diseases: A Review of His Arguments and Evidence," by Edgar Erskine Hume, M.D., Dr.P.H., LL.D.; 1927. New York: Paul B. Hoeber Incorporated. Post 8vo., pp. 156, with illustrations. Price: $1.50 net.

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Almoners.

THE problems of hospital administration and of the conditions governing the admission of patients into the public hospitals are becoming more and more complex. The days are past when the public hospitals were exclusively charitable institutions to which only the indigent were admitted. The equipment, the organization and the extension of the great metropolitan hospitals have combined to alter their significance and uses. With the advent of modern methods of training medical students and nurses, with the progress of medical science, with the ever increasing complexity of special forms of treatment has come the demand on the part of the people that so elaborate a public institution must not be reserved for one class of citizen. The question of the right of all and sundry to seek medical and surgical treatment in public hospitals has been advocated and challenged for several years and today is still undecided. It is encompassed by many complicating facts. Judged from a broad point of view the hospital question today is a problem of economics. Treatment has become very expensive and since it is necessitated by illness which incapacitates the patient from earning his livelihood, it is becoming an increasingly heavy burden on the man of relatively small means. For a time it seemed as though a compromise might be reached by the admission of those only who are unable to pay for the necessary treatment in private. Objections have been raised to this proposal. On the one hand it has been claimed that if the financial arrangements of the hospitals are taken out of the control of the charitable and the funds are provided out of consolidated revenue, the benefits should be available to all citizens. Further it is pointed out that only the very rich can afford to call in the services of a dozen specialists as well as of the physician or surgeon who may be chosen for the care of the patient. On the other hand it has to be remembered that the medical profession gives gratuitous service to the poor who apply for treatment at public hospitals. The services of the medical profession are available elsewhere for those who can pay. In the next place it is pointed out that even if the governments subsidize the large public hospitals, the charitable public is asked to contribute a substantial proportion of the annual revenue. These voluntary contributions are solicited in the name of charity and are undoubtedly given to help the poor. Lastly, every one is agreed that the primary function of the public hospitals is to provide care and treatment to poor people. If others are admitted, it is understood that sufficient accommodation is reserved for the poor.

In theory and to some extent in practice a compromise has been reached between the hospital authorities and the medical profession. If persons admitted to public hospitals can afford to pay the maintenance charges, part of the amount paid is earmarked for treatment and this money is paid into a staff fund, to be used at the discretion of the members of the honorary medical staff. If the great metropolitan public hospitals are to be used in the future by anyone whose disease or injury demands institutional treatment, some plan of this kind is inevitable. In the meantime the hospitals retain their character as places where indigent patients have a right to the services of the honorary medical and surgical officers. In either case it is essential that both the institutions and the medical profession should be safeguarded against exploitation by unscrupulous people who feign poverty in order to obtain the best treatment and care for little or nothing. The ancient expedient for this purpose is inquiry by a trained almoner. It is the duty of the almoner in England to ascertain the social and financial position of those seeking aid at hospitals, to assist the needy to obtain financial and other help when necessary and to guide poor patients in carrying out the directions of their physicians or surgeons while they, the patients, are in their own homes. A skilled almoner is thoroughly informed in regard to all charitable and semicharitable

organizations and keeps in close touch with those agencies that afford assistance to poor people after discharge from hospitals. In particular the almoner should act as an intermediary between these patients and government or municipal departments having for their object the amelioration of the condition of those impoverished by incapacitating disease. It will be recognized from these brief remarks that an almoner should be a person specially trained for a many-sided and difficult vocation. The office demands tact, keen perception, knowledge of human beings and a power of discrimination.

There is a movement on foot in Melbourne to establish a scheme for the training of almoners. A central council is being formed with representation of the Victorian Government, of the Victorian Branch of the British Medical Association, of the Tuberculosis Bureau of the Health Commission, of the College of Domestic Economy, of the Central Council of Ladies' Benevolent Societies, of the Charity Organization Society and of each of those institutions or societies which are prepared to adopt, endorse or cooperate in an almoner scheme. It is proposed at first to restrict the activities of the council to the education and training of almoners and to propaganda work. The scheme will operate in all the public hospitals and charitable organizations in Melbourne. Miss Cummings, of Saint Thomas's Hospital, London, has been asked to select an Australian nurse or voluntary worker who has undergone a training as almoner and to engage her to take charge of a training school for almoners at the Melbourne Hospital. A curriculum is being drawn up and it is anticipated that opportunity will soon be given to competent candidates in Melbourne to become efficient as trained almoners.

Fuller details of the scheme will be published in a short time in these columns. We regard this movement as an important one, in view of the undoubted necessity of making provision for the assistance of necessitous patients seeking admission to hospitals, during the period of their attendance as out-patients and after discharge, and for the adequate protection of the hospitals and the medical profession against exploitation by the undeserving.

Current Comment.

GASTRECTOMY.

IT is customary for medical practitioners to refer to the cure of a patient after he has been subjected to a surgical operation necessitating removal of portion or even the whole of an organ or after he has suffered from an illness accompanied by the destruction of tissue. It would be much better to refer to the patient's recovery, but if the word cure is used, it must be recognized that there is a vast difference between clinical cure and actual cure. A patient may suffer from some cerebro-spinal manifestation of syphilis; mercury, iodide of potash and some synthetic arsenical preparation may be injected; he may even be deliberately infected with malaria. He may then recover and be able to resume his previous occupation; he cannot, however, in the strictest sense be regarded as cured, because the nerve cells will have sustained permanent damage. Again, an ulcer or a new growth may appear in the stomach. A large portion of the stomach may be removed and after a period of convalescence of varying length he may be able to take up his former work, perhaps with all his old energy and without any inconvenience as far as restriction of diet is concerned. He is not cured. There will in the latter instance be permanent loss of secreting tissue, but the natural power of the body for compensation is such that little abnormality will be evident. In discussions on the value of certain methods of treatment a series of patients is generally taken, their condition before the institution of therapeutic measures is described, they are observed over a period of years and their freedom from symptoms is noted. It is, therefore, refreshing to note that G. Gordon Taylor, R. Vaughan Hudson, E. C. Dodds, J. L. Warner and L. E. H. Whitby have gone much further than this in a study of the remote results of gastrectomy.[1]

The work carried out by them consisted in the study of fifty-two hospital patients, fourteen females and thirty-eight males. The observations were commenced in January, 1928; the operation of gastrectomy was performed between the years 1921 and 1926. An effort was made to exclude patients suffering from malignant disease; two of them, however, subsequently suffered from malignant disease and at the time of reporting were dying of the condition. The investigation was made with two objects, first of all to contrast the preoperative and postoperative condition of the patient from as many points of view as possible, secondly, to determine what effect the removal of part or the whole of the stomach had upon the digestion, metabolism, intestinal flora and composition of the blood. Clinical and laboratory findings are described.

In the great majority of patients the lesion was a gastric ulcer, a certain number suffered from duodenal ulcer and a few had gastro-jejunal ulcers.

[1] *The British Journal of Surgery*, April, 1929.

It is obvious that if any importance is to be attached to the results of subsequent test meals and other laboratory examinations, there must be some definite information as to the amount of the stomach removed. In so-called total gastrectomy the whole of the stomach is very rarely removed. The gastric function will be carried on to a certain extent by the part which is left behind and this part is capable of much stretching and dilatation. The authors themselves state that it is surprising how much stomach is left behind when it is thought that a total gastrectomy has been done. They are rather vague about the amount removed in their series and state that it is probable that in the great majority of partial gastrectomy operations one-third of the stomach is left and that in some cases more than this remains. They state that their physiological conclusions cannot be taken as final on this account. In estimating the results of operation on the patient the postoperative capacity for work was taken as being the most reliable criterion. Patients who were able to do full time work without undue fatigue, who ate a normal diet and who enjoyed good health, were designated 100% efficient. Patients who did part time work only, or who did whole time light work and who took a restricted diet, were considered to be 50% efficient. In addition to the fifty-two patients who were fully investigated, there were ten who were interviewed and examined, but who refused further investigation; there were also six whose fate was known and verified, but who were not interviewed. Of the fifty-two patients none was 100% efficient before operation, two were 80% efficient, ten were 50% efficient and in forty the efficiency was nil. After operation 46 were 100% efficient, four were 50% efficient and in two the efficiency was nil.

As far as the laboratory findings are concerned, some points of interest emerge. In all the emptying time was greatly reduced. In twenty-six patients it was less than one hour and a quarter. In four only was it over two hours. The resting juice was always scanty and bile was always present. The test meal charts of fifty-two patients are given. In nine of them free hydrochloric acid was present. All those with free hydrochloric acid had an emptying time of over one and a half hours. It must be presumed that in these persons more gastric tissue was left behind than in the others, but this cannot be determined from the available data in the paper. It is pointed out that the disparity between the free and acid curves is great and in no way resembles the type of curve found in pernicious anæmia. It was found that the patients with rapidly emptying stomachs passed a large amount of urine immediately after the test meal. This was regarded as evidence of the pyloric control of water absorption. Chemical examination of the blood failed to reveal any abnormality other than a slight rise in the uric acid and cholesterol contents. They can find no obvious reason why this should occur. Although it is not proposed to enter into a discussion of the uric acid or cholesterol metabolism of the body, it may be pointed out that the variation in the dietary of these patients may have had something to do with the findings and, further, that since the hormonic control of the digestive mechanism would undoubtedly be upset, there would be a derangement of the liver metabolism and the liver takes a share in the metabolism of both substances. It is pointed out that the dietary of the patients after operation varied within wide limits, although they were given full directions in regard to what was suitable for them. "Many patients throve upon what would be considered entirely unsuitable."

A hæmoglobin estimation, a red and white cell count and an examination of a film were made in each instance. Twenty-three males and six females had normal blood counts, eight males had mild anæmia (hæmoglobin value of between 70% and 80% and erythrocytes between 4,000,000 and 4,900,000 per cubic millimetre) and seven males and eight females had severe anæmia. The anæmia did not resemble that of the pernicious type and no evidence of the occurrence of pernicious anæmia could be found in any of the patients. The authors state that their findings agree with those of others that pernicious anæmia does not occur after gastrectomy. They draw attention, however, to the large percentage of patients with secondary anæmia. In the first place in regard to achlorhydria and anæmia, it is interesting to note that three of the patients with anæmia had free hydrochloric acid in the remains of their stomachs. Achlorhydria, of course, is not an essential factor in anæmia. According to modern teaching pernicious anæmia is of bacterial origin and achlorhydria is necessary for its production. That pernicious anæmia did not occur in any of this small series of patients is because the bacterium was not present or because the hydrochloric acid present was sufficiently strong to kill the microorganism.

The final question to be considered is that concerned with the manner in which gastrectomy produces its good results. The authors of the article under consideration state that the amount of acid produced after an operation of gastrectomy is in a definite ratio to the amount of stomach removed. They name three factors: a lower gastric acidity than normal, a less mobile stoma and a potential source for very rapid neutralization. To this must be added the removal of a large part of the possible ulcer-bearing area (although removal of an ulcer does not remove the cause of the ulcer).

The work of these five observers demonstrates clearly the manner in which the value of a method of treatment can be estimated. Ideally it is necessary to have observations of the kind described by them made before the institution of treatment. This would be useful particularly in regard to the question of anæmia and cholesterol and uric acid. The careful laboratory control of patients subjected to gastrectomy makes it possible to determine which are clinically cured and which are only relieved. As a rule a longer period will be necessary than that described by the authors.

Abstracts from Current Medical Literature.

SURGERY.

Ganglion.

L. CARP AND A. P. STOUT (*Surgery, Gynecology and Obstetrics*, October, 1928) have made a study of all aspects of ganglion. Ganglia are cysts resulting from mucinous degeneration of connective tissue. They occur generally in or are attached to capsules of joints or tendon sheaths, but do not communicate primarily with joints or sheath spaces. The degeneration proceeds with fibrillation of the collagen fibres and accumulation of mucin both within the cells and in the intercellular spaces. This results finally in the disappearance of cells and fibres in a number of adjacent areas. These embryonic cysts coalesce and lead to the formation of larger cavities. The cause of this degeneration is at present still obscure, but it is probably due not to any lack of blood supply. Ganglia are not neoplasms. Trauma plays a major rôle in their production. Ganglia are most frequently found in females of slight build in the second, third and fourth decades. The chief symptoms and signs are swelling, pain, interference with function and tenderness. A differential diagnosis must be made from tuberculosis of the joint or tendon sheath, lipoma, myxoma, fibroma, osteoma, sarcoma, bursitis and aneurysm. Late results after various therapeutic measures suggest the inadvisability of operative treatment. So many ganglia disappear spontaneously and after breaking and pressure, aspiration and pressure or aspiration with injection of chemical irritant and pressure, that operative therapy should be recommended only when non-operative treatment has failed and when there are persistent troublesome symptoms, signs or deformity. Careful, complete excision of ganglia under strict asepsis and with a bloodless field will probably not be followed by reappearance.

Effect of "Lobelin" on Respiration.

H. FRANKEN (*Klinische Wochenschrift*, March 5, 1929) describes the results of his experiments with "Lobelin" in stimulating the respiratory centres during anæsthesia. He concludes that the drug has a specific action on the respiratory centre. Intramuscular injection of 0·01 gramme has no effect except when little damage has been done to the centre. However, in cases of *asphyxia neonatorum* this amount has produced excellent results. By intravenous injections the effect is instantaneous but transitory, depending on the amount given. In doses of 0·0015 gramme the effect lasts only one minute during which respirations are doubled in volume. When 0·006 gramme is given over a period of four minutes, the effect lasts for at least five minutes. Such dosage is accompanied by stimulation of the vagus, as evidenced by coughing and rumbling of gas in the intestines. The author recommends that in respiratory failure during anæsthesia intravenous doses of "Lobelin" 0·01 gramme should be given, at least three minutes being taken to introduce the drug. This should be accompanied by artificial respiration and the administration of oxygen and carbon dioxide. Once respirations are established, the inhalation of carbon dioxide will greatly increase the rhythm and volume.

The Periwinkle Caecum.

A. C. JORDAN (*The Practitioner*, February, 1929) describes a condition in which there is ptosis of the caecum with rotation on its long axis, as the periwinkle caecum on account of its resemblance to the shell fish. The drooping bowel curls in such a way that obstruction may occur in the terminal part of the ileum. The condition may be demonstrated with the X rays by placing the patient on his left side with the trunk inclined to the horizontal plane at an angle of 45°. Ptosis of the caecum is but an incident in intestinal stasis due to habitual overloading of the caecum and ascending colon. A complete X ray examination of the whole alimentary tract may reveal a high, sharp splenic flexure or a kinked iliac colon or enormously elongated pelvic colon. In treatment certain conditions necessarily call for surgical methods. A "controlling" appendix may require removal and an iliac kink straightening. The results of removal of the pelvic colon have not been good. Lifting of the caecum (extracting the "winkle" from its shell) is practised with fixation of the caecum if necessary. Surgical measures are but preliminary and are undertaken to render other treatment effective. Posture, enemata, massage and correct diet are all of value. With regard to medicinal measures, liquid paraffin and colloidal kaolin (kaylene) are recommended. Prevention should begin in infancy.

Raynaud's Disease of the Upper Extremities.

A. W. ADSON AND G. E. BROWN (*Journal of the American Medical Association*, February 9, 1929) record the successful treatment of Raynaud's disease of the upper extremities by resection of the sympathetic cervico-thoracic and second thoracic ganglions and the intervening trunk. They insist on the necessity of interrupting all of the grey rami to the upper extremity and give details of the operative procedure that they have devised to achieve this object. Certain anatomical considerations are of importance. The lower cervical ganglion sends grey rami to the seventh and eighth cervical spinal nerves and the first thoracic spinal nerve. The first thoracic ganglion is connected with the first thoracic spinal nerve and the lower cervical ganglia by means of grey rami and the second thoracic ganglion with the first as well as the second thoracic spinal nerves. Since the first thoracic spinal nerve contributes largely to both the ulnar and median nerves, it is obvious that these sympathetic fibres from the second thoracic ganglion must be divided, if a complete result is to be obtained. The distribution of the sympathetic nerves to the vessels corresponds roughly to the distribution of the spinal nerves to the skin and muscles. The problem was to remove the second thoracic and the cervico-thoracic sympathetic ganglia (the lower cervical and first thoracic ganglia are practically one structure, hence the term cervico-thoracic) and the intervening trunk in order to remove completely all the sympathetic impulses to the subclavian and axillary arteries and brachial plexus. It was found that the best method of approach was from the posterior aspect, a dorsal mid-line incision being used. After operation it was found that skin became dry and was of normal colour and that the temperature was raised over the area supplied by the sympathetic nerves, portion of whose trunks had been removed. One disturbing result of the operation was the development of Horner's syndrome on the left side. The miosis was present three weeks after operation. As the feet were affected by Raynaud's disease as well as the hands, the lumbar operation was performed on both sides. The patient was discharged from hospital with complete relief of the disease.

Wandering Spleen.

H. RUMMEL (*Münchener Medizinische Wochenschrift*, March 1, 1929) describes a case of wandering spleen in a *multipara* which gave rise to acute symptoms because of torsion of the pedicle. Prior to operation the condition was considered to be due to torsion of the pedicle of an ovarian cyst. This confusion in diagnosis is a common one as recorded in the literature of the subject and diagnosis is often difficult before operation. The urine of the author's patient also contained albumin, casts and red cells. The presence of urinary deposits may also make the diagnosis from a renal tumour or hydronephrosis somewhat difficult. While some wandering spleens are met with in *nullipara*, the majority occurs in women with lax abdominal walls and enteroptosis following on child birth. No clear reason for the wandering of the spleen has yet been formulated. In the majority of instances extirpation of the spleen is the only treatment.

Strictures of the Common and Hepatic Bile Ducts.

WALTMAN WALTERS (*Surgery, Gynecology and Obstetrics*, March, 1929) discusses the subject of strictures of the common and hepatic bile ducts. Most of such strictures are due to injuries to the ducts. Spontaneous stricture has been often recorded. These are probably the result of infection either of the biliary passages or

their adjacent structures without the patient having been previously operated on or are carcinomatous. Inflammation of the intrahepatic and extrahepatic biliary passages is associated with strictures of the common duct and in many instances may be the predisposing factor to the development of the stricture. This may account for the frequency with which incomplete intermittent obstruction occurs subsequent to plastic operations for the relief of strictures of the common or hepatic bile ducts in some instances. A report of seventeen cases of stricture of the common bile duct in which operation was performed is presented with a description of the technique used. The operation of choledochduodenostomy or hepatico-duodenostomy with end-to-side or a side-to-side anastomosis, with an accurate union of mucous membrane of the duct to that of the duodenum, has proved to be the most satisfactory operation of the group. With this method excellent results have been obtained. The successful treatment of strictures of the common bile duct and the hepatic duct is dependent on the fact that sufficient duct remains proximal to the stricture to permit accurate anastomosis to an opening in the duodenum, as well as on the fact that a minimal amount of infection exists in the walls of the duct and intrahepatic biliary passages. In one instance in which there was a very large anastomotic opening between the duct and the duodenum, severe cholangitis developed two or three months following the operation in the absence of extrahepatic biliary obstruction. It was accompanied by progressive enlargement of the liver and spleen and the formation of ascites. With the subsidence of the intrahepatic infection jaundice and fever disappeared, but the enlargement of the liver and spleen still persisted. The ascites, however, disappeared after the administration of mercurial diuretics. A case is reported in which the establishment of an external biliary fistula for complete stricture of the common and hepatic ducts and the transplantation of the cone-shaped fistulous tract into the duodenum was followed by a rapid recovery with relief of symptoms.

Surgical Procedures on the Stomach and Duodenum.

RICHARD H. MILLER (*The New England Journal of Medicine*, March 21, 1929) writes on the indications and results of the surgical procedures on the stomach and duodenum. Whatever may be the remote causes of peptic ulcer, the factor which must be given most consideration, is the disturbance of balance between the acid secretion and the alkaline duodenal contents. Any operation for ulcer to be successful must permit of the subsequent proper alkalinization of the stomach contents. Surgeons should stop talking about "ulcer" without a qualifying adjective designating either duodenal ulcer, meaning a benign lesion, or gastric ulcer, meaning a possibly malignant lesion. Duodenal ulcer when recent and acute usually is and should be treated medically. For simple duodenal ulcer gastroenterostomy is the satisfactory operation and, except in unusual circumstances, extensive resections cannot be recommended. Local excision, however, is an operation of merit. Gastric ulcer should be treated as a precancerous lesion and should be excised. The type and extent of the operation depends on the individual lesion. The physician and surgeon should confer over every patient, particularly the patient with gastric ulcer, to decide just what should be done for the best. In gastric surgery the operator should imagine himself to be in the place of the patient. The jejunal ulcer is due to the improper alkalinization of the acid stomach contents. Operation is the only treatment for jejunal ulcer. The gastro-enterostomy may be undone, though after this the original ulcer may recur, if not, radical resection with closure by the Pólya method will be necessary. The Devine operation deserves careful consideration.

Malignant Bone Tumours.

V. PUTTI (*Surgery, Gynecology and Obstetrics*, March, 1929) discusses his observations on malignant bone tumours. The problem of neoplasms of the skeleton, clinically considered, is first and foremost a problem of diagnosis. The clinical history and the radiogram are the foundations of the diagnosis. A history of trauma is frequent. Isolated direct trauma usually induces a tumour of the peripheral layers of the bone with a short latent period, whereas indirect trauma, open wounds, distortions and fractures are causes of sarcomata with a long latent period and a central situation. No specific symptoms are associated with malignant bone tumours. Putti states that it is an exaggeration to say that pain is the most common sign of neoplasm. The pain associated with sarcoma is of a peculiar character; it is intense, dull, constant and localized, but not accounted for by other local signs. Again in Ewing's tumour the intermittent, spasmodic pain which is associated with a rise in temperature, is not suggestive of neoplasm, but is typical of an inflammatory condition—osteomyelitis. On the other hand, tumours of the pelvis and last lumbar vertebræ, induce pain like ordinary sciatica. Importance should be attached even more than to pain, to the question of the location of the tumour. A tumour of the diaphysis is almost always an osteogenic sarcoma of the periosteal type or it is an endothelioma. A tumour of the metaphysis, if it is not innocent, is a tumour of the central type. An epiphyseal tumour in the great majority of cases is a giant cell tumour. Tumours of the astragalus and *os calcis* are either giant cell tumours or else myxomata. A localized tumour of the vertebral column, unless it is secondary, is either an angio-endothelioma or else a giant cell tumour. In the differential diagnosis it is not so important to determine the type of growth as to determine whether the lesion is a tumour or inflammatory disease, also whether the tumour is primary or secondary. The history, progress of the case, the physical examination and biological tests may give valuable information. In some cases the decision will always remain with the radiologist. However, the X ray signs are only relatively specific. By no other method of investigation is it possible to recognize in so rapid and comprehensive a way the anatomical features of the tumour, that is, its situation, extent, structure and relations. Biopsy is the final court of appeal, but on account of the difficulty of a pathologist making a diagnosis on the findings from a fragment of tissue, this method does not find favour. The author favours the idea laid down in the new classification of the Committee of the Registry of Bone Sarcoma with modifications. The treatment at present is not very satisfactory.

Dupuytren's Contraction.

ALLEN B. KANAVEL, S. L. KOCH AND M. L. MASON (*Surgery, Gynecology and Obstetrics*, February, 1929) give a description of the palmar fascia, a review of the literature and a report of twenty-nine patients treated surgically for Dupuytren's contracture. It is important to practise wide excision, not only of the contracted fascia, but of all its attachments to the skin, the interfascial septa, the volar interosseous fascia, the metacarpal bones and the phalanges. Although in such an operation apparently normal fascia may be removed, it is not considered that this is a disadvantage, but rather an added guarantee against recurrence. Careful dissection and elevation of the skin to avoid trauma and subsequent necrosis are essential. Painstaking effort is necessary to avoid injury or division of the digital nerves and blood vessels; these are frequently embedded in the bands of fibrous tissue which draw the fingers into flexion. Excision of skin that is hopelessly involved, should be carried out and the excised skin should be replaced by a free, full thickness graft. This is preferable to making an attempt to bring together wound edges under tension. In long standing contractions with considerable contraction of the fingers, excision of the head of the proximal phalanx and shortening of the extensor tendon of the affected fingers through a dorsal incision (Hutchinson's operation) should be performed. It is advisable to commence active movements of the fingers and hand as soon as the operative wound is soundly healed. If treatment is carried out in such a manner, complete restoration of function may reasonably be hoped for, although cellular infiltration of the hand and partial anæsthesia and stiffness of the fingers may persist for a considerable period of time after the operation.

Medical Sociology.

THE CARE OF CRIPPLED CHILDREN.

SHORTLY after the end of the war the British Empire stood aghast at the revelations through the recruiting channels of the appalling amount of incapacity and subnormality in the community. In spite of the attempts to awaken public interest in matters of health and in the problems of healthy childhood, all the efforts of official, semi-official and voluntary organizations seemed to have been unavailing in the reduction of the frequency of orthopædic defects in childhood. It is true that no accurate record was available of the extent of these defects in any large British community. Despite this it is known that up to a few years ago practically nothing was attempted in the prophylaxis of poliomyelitis, that the reduction in the incidence and mortality of that form of tuberculosis known as surgical was relatively insignificant, that the medical profession was unable to combat the greater number of varieties of spinal and nervous paralyses and that effective reconstruction as an orthopædic process was in its infancy. The introduction of reeducation and of vocational training in the post-war period compelled the public to recognize the seriousness of the problem of the cripple to the nation and provided an impetus to those large minded citizens who regard misfortune in others as an irresistable impulse to activity. The first movement having for its object the recording of the actual number of cripples in the community took place in Cleveland, United States of America, in 1916. A few years later the Rotary Club of Chicago conducted a survey in that city and shortly after a similar census was taken in New York. In England a later start was made by an inquiry in Birmingham. Since 1925 many other cities have been chosen in almost every country in Europe for a serious campaign to cope with the problem. In our issue of July 4, 1925, Dr. W. Vickers contributed an article on the education and training of cripples in the United States of America. In this article he discussed the report that had been issued after the survey had been carried out in New York. At the end of this he pointed out in a most significant manner that of the 17,514 persons drawing pensions within the State of New South Wales aggregating well over three-quarters of a million pounds sterling, about thirteen hundred are stated to be young people suffering from infantile paralysis, tuberculosis of the bones and joints, hemiplegia, accidents and diseases of the circulatory system. Dr. Vickers held that much of the crippling caused by these diseases and injuries could have been prevented, had the subjects been handled before they reached the age of ten years.

A year later a very energetic lady, Miss Agnes Hunt, took a bold step in England by establishing *The Cripples' Journal* with the object of stimulating sympathy for and active intervention on behalf of the crippled children of Great Britain. The movement was supported by Sir Robert Jones. The ball has therefore been set into motion; the impetus necessary to keep it going is becoming steadily less. Movements of this kind are never confined to one country or to one continent. What has been begun on the one side of the Atlantic Ocean must find its counterpart with little loss of time on the other; the same is true of the two sides of the Pacific Ocean. In connexion with this particular movement the machinery of the Rotary Clubs has been utilized extensively for supplying the initial impetus.

The Scheme in Sydney.

In January of this year the Community Service Committee of the Rotary Club of Sydney was instructed to report in detail on the best method of giving effect to a resolution of the Club that the major activity for the year 1928-1929 should be the education and vocational training of crippled children. The committee has now issued its report and this report has been considered by the Council of the New South Wales Branch of the British Medical Association. The report has also been examined with great care by the members of the Orthopædic Section of the New South Wales Branch and the Council of the Branch has the advantage of the considered opinion of these members. The Council has given the scheme its approval; it endorses the suggestion that the orthopædic arrangements of the work should be carried out by a committee consisting of the existing members of the Orthopædic Section of the Branch; it has further nominated five prominent members of the medical profession to act as the medical members of the advisory committee. They are Sir Charles Clubbe, Sir Jarvie Hood, Dr. George Abbott, President of the third session of the Australasian Medical Congress (British Medical Association), Sydney, 1929, Dr. Brown Craig, President of the New South Wales Branch, and Dr. Harvey Sutton.

The Rotary Club scheme in brief is to establish an office in Sydney with a competent organizer and a clerical staff to act as the intermediary between the committee of crippled children service and the working committees. The latter are six in number, the publicity, the education, the records, the survey, the clinics and the finance committees. The advisory committee, comprising members of the medical profession, persons with experience in education and those with experience in hospital administration, is to be available for reference when required. The programme of the committee of crippled children service is to locate all the crippled children resident in Sydney, to bring to these crippled children the best medical advice, to arrange for such surgical or medical treatment in hospitals as may be recommended by competent orthopædic surgeons and children's specialists, to direct the attention and to arouse the sympathy of the public to the needs of the crippled children, to provide statistical information of value to the medical profession and to establish an organization affiliated with similar organizations overseas for the purpose of the care, cure, education, vocational training and placement in industry of juvenile cripples.

The Rotary Club of Sydney proposes to carry the burden of the scheme for twelve months. It is anticipated that about a thousand pounds will be needed for this initiation and this will be provided by the club. The main work will be the tracing of crippled children, the compiling of a complete register, with records of the medical and social histories of the children, the classification of the cripples and the provision when necessary of medical and orthopædic treatment, of academic education and of vocational training of each child, according to its needs.

Experience Elsewhere.

It has been very difficult to obtain extensive information concerning the incidence of each form of deformity or crippling infirmity in any part of the world. In the first place the Rotary Club has adopted a definition of a crippled child in American terminology. A crippled child is one whose activity is or may become as a result of a progressive disease restricted by loss, defect or deformity of bones or muscles to such a degree as to reduce his normal capacity for education or self-support. The American plan usually includes persons up to the age of twenty-one years among "children." It appears that the New York survey disclosed 3·6 juvenile cripples, the Cleveland survey 1·3, the Massachusetts survey 2·8, the Toronto survey 2·1 and the Birmingham survey 2·8 per thousand of population. These surveys yield an average incidence of 2·5 crippled children per thousand persons living. On this basis there would be about two thousand five hundred crippled children in Sydney. It is further estimated on the basis of the previous experience in America that about 625 of these children would require care and treatment in hospital. It is important to note that the condition of more than half of the crippled children treated in Chicago after the survey was improved and that that of a further quarter had improved to a point and was stationary.

The cooperation of the medical profession will be sought in several parts of the work. In the first place every agency likely to be of use will be approached in the survey and enumeration of the crippled children. Many of them will be under the care of medical practitioners and the relations between these patients and their medical advisers will not be disturbed in any way. Information will be sought from each medical practitioner treating a crippled child for the purpose of the record, to enable the com-

mittee to control the education, vocational training and introduction into a calling suited to the patient's physical condition. The survey will not be a mere enumeration. Information will be sought concerning the social status, the home conditions, the degree of handicap, the physical disability, the mental condition and the previous history of every child. In this way and in this way alone will it be possible to determine whether or not the intervention of the committee will result in a material benefit to the child.

After the information has been gathered, it will be necessary to ascertain whether adequate facilities for the treatment of the disease or defect are available to each child. This will result in a reference from time to time to the diagnostic clinics where the opinion of orthopædic surgeons will be given as to the advisability of operative or other treatment in special institutions. It is recognized that a treating practitioner may be requested to send his patient to a clinic for the opinion of an orthopædic surgeon under certain circumstances and it is hoped that, since this step is an essential part of any scheme for the proper care of cripples, the securing of a "second opinion" will be welcomed. The greatest care will be exercised by the surgeons and physicians in the clinics and in hospitals to safeguard the legitimate rights of the general practitioner. Both practitioners will have to remember that the welfare of the patient must be paramount. It is further anticipated that the result of the survey will be that many of these children will be placed under treatment at an early age. The main object of the committee's intervention is the prevention of incapacitating infirmity. If early medical, surgical or institutional treatment can effect this, the gain to the community will be immense. The cooperation of the Department of Health will be enlisted at this stage, just as it is being enlisted in Victoria in the campaign to combat the onset of paralysis from poliomyelitis.

While active treatment is being carried out, some form of scholastic education should be undertaken. If the defect or the treatment renders it impossible for the child to attend school, the teacher will have to be brought to the child. The nature of the schooling, like the nature of the medical or surgical treatment, will depend on the condition of the child. It may be necessary to determine the mental age of the children in this connexion. In other words the scheme includes the proper care of the child's mind as well as of its body. Without this step, it would be impossible to proceed with prospects of success to the next stage of vocational training. Here again the medical profession collaborating with the educationalist has an important part to play. The last stage of the scheme, the selection of a suitable calling and the employment of the adolescent in that calling, will as a rule not demand help from the medical profession.

The Public and the Scheme.

The Rotary Club of Sydney hopes that this year's work in Sydney will be a beginning. At the end of the period the public will be asked to take over the work by supporting a branch of the International Socitey for Crippled Children. This body is firmly established in America and elsewhere and a local branch would be the proper organization to take charge of the crippled child, to ameliorate his lot and to help him to take his place in the world of activity.

From the first the Rotary Club of Sydney will seek to gain the sympathy and interest of the public by various forms of publicity. The names of the members of the advisory committee will be published with as little personal advertisement as possible. The positions held by each of the members have justified their selection and it must be admitted that their names will act as a guarantee to the public of the soundness of the scheme. The names of the orthopædic surgeons and other practitioners serving on the medical committee and acting at the diagnostic clinics will not be published. Every care will be taken to have the work conducted in accordance with the rules of medical ethics and the committees acting for the committee of crippled children service will refrain from embarrassing the medical practitioners connected with the scheme. Should any matter arise in which the correctness of the conduct of a medical practitioner is challenged, the necessary inquiry will naturally be referred to the Council of the New South Wales Branch of the British Medical Association.

It is hoped that this movement will extend over the whole of Australia. The Rotary Clubs in other capital cities will probably initiate schemes as has been done in Sydney. Similar machinery may be put into motion in the country towns. It will be relatively easy to extend the work, once success has been assured in Sydney. Much will depend on the support extended by the medical profession, by the Education Department, by the Board of Health and by various voluntary organizations.

The approval of the New South Wales Branch of the British Medical Association has been given and this should satisfy the medical profession that the scheme is worthy of support and of its whole-hearted cooperation. Further information of the development of the work will be published in this journal from time to time.

Medical Societies.

THE CLINICAL SOCIETY OF THE HOSPITAL FOR SICK CHILDREN.

A MEETING OF THE CLINICAL SOCIETY OF THE HOSPITAL FOR SICK CHILDREN was held at the Hospital for Sick Children, Brisbane, on January 24, 1929, DR. DONALD CAMERON in the chair.

A Case for Diagnosis.

DR. SHIRLEY LANE showed a patient for diagnosis. A male child, *ætatis* five years, had complained of pain in the back for one month. There was no history of injury. The child had run about all day and had complained at night. When he sat up a chair he had had to be helped up. Pain had not awakened him at night and there was no history of fever. He had been treated for plumbism.

Examination disclosed that he was a well nourished child, walking with a slight limp on the right side and the pelvis tilted very slightly on the left side. He had no scoliosis or lordosis; there was no shortening of the limb. Two gluteal folds were apparent on the left side and only one on the right side. On flexing the left thigh, it flexed well. When the right thigh was flexed, the left went with it. When asked to jump down two feet, the child put his hand on the lower lumbar vertebræ and said the pain was there.

X ray examination of the spine and both hips had been carried out and Dr. Nisbet had reported nothing abnormal. It had been decided to keep the child in bed and to try heliotherapy.

Hæmorrhagic Gastritis.

DR. S. F. MCDONALD showed a female patient, aged eight years. The history was that she had been well two days prior to admission. She had then complained of abdominal pain and nausea, but had no vomiting and had run about all the time. The next day she had again complained of pain. Then on the day of admission, January 22, 1929, the pain had been much more severe and had occurred in spasms. The bowels had acted slightly, but the appearance of the motion had not been noticed. Four hours before she had been seen at hospital she had vomited clots of blood. Then again just before she was seen, she had vomited a clot the size of a walnut and some bright blood.

On examination the temperature had been 37·1° C. (99° F.) the pulse rate 136 and the child had looked pale and pulled down and had had the appearance of having had a severe hæmorrhage. The tongue had been clean, the teeth good, the tonsils slightly enlarged. There had been no hæmorrhage in the nose or throat. The spleen had not been enlarged and there had been no petechial spots. She had complained of diffuse abdominal pain and

discomfort. The blood vomited had been bright and had contained no "coffee ground" material.

Dr. McDonald discussed the differential diagnosis. The following conditions had to be considered: (i) Essential purpuric condition associated with a diminution of blood clotting (there was no enlarged spleen); (ii) an obscure hæmorrhage from the stomach of unknown cause; (iii) gastric ulcer (which was not unknown in children); (iv) bleeding from the nose or retropharyngeal abscess in which the blood went to the stomach and was then vomited; (v) acute hæmorrhagic gastritis. The blood count revealed: Erythrocytes, per cubic millimetre, 2,750,000; hæmoglobin value 40%; colour index, 0·8; leucocytes, per cubic millimetre, 19,500; neutrophile cells, 88·5%; lymphocytes, 10·5%; large mononuclear cells, 1%. Punctate basophilia and anisocytosis had been found and the platelet count had been 432,000 per cubic millimetre.

The result of the blood examination excluded thrombocythæmia. The child had improved steadily, there had been no more vomiting, the bowels had been opened by enemata and the result had consisted of tarry stools. A blood transfusion had not been considered necessary, as the child was improving. The pulse rate had not been above 160 per minute.

Dr. McDonald stated that fruit, eaten green, would often cause hæmorrhagic gastritis, particularly if eaten without being cut up into small pieces.

DR. J. V. DUHIG said that he had done a *post mortem* examination in a child with hæmorrhagic gastritis and quoted the condition as resembling the one under discussion. The cause of death had been cerebral embolus, due to thrombosis of the veins, draining the pylorus and duodenum into the duodenal vein. There had been thrombosis of all the tributaries to the jejunal veins. The stomach had manifested gastritis which in his opinion in young children was always hæmorrhagic.

Hypothyreoidism.

Dr. McDonald also showed a patient who had been sent into the hospital as a cretin and who had been given large doses of thyreoid gland without any effect. He considered the patient was just a feeble minded hypothyreoid child without cretinism. He had not the cretin's hand, facial appearance, tongue or protuberant belly.

The patient was three and a half years old. Measurement from apex to base was 92·5 centimetres (37 inches), the span of the two arms was 90 centimetres (36 inches). A cretin was shorter in stature than across. The most important thing in these conditions was the child's expression. Also the child had been having large doses of thyreoid without effect for some time.

DR. J. BOSTOCK agreed with Dr. McDonald that the child had no characteristics of a cretin. He was just one of the 90% of feeble minded that did not fall into any particular class. The prognosis was very guarded.

Diabetes Mellitus.

DR. H. MATHEWSON showed a child, aged fifteen months, who was suffering from *diabetes mellitus*. This patient was younger than any he had shown before. The history was that during the past two months the child had been passing large quantities of urine and drinking large amounts of water. The urine left a pink stain on the napkins, was thick and left white stains on the floor. The child also had *pruritus vulvæ* and glycosuria.

Two months previously a blood sugar estimation had been made and the finding had been 0·4 milligramme *per centum*. The child had been rather drowsy, so it had been given "Insulin" ten units in two doses. The blood sugar level had dropped to 0·05. This had been worrying, so the child had been given all the glucose it could take and in three hours the blood sugar had been 0·39. After this the child had been starved and given "Bovril" only. On January 18, 1929, a glucose tolerance test had been done after feeding according to the accompanying table and this had revealed half an hour after taking glucose a blood sugar level of 2·0, two hours after glucose a blood sugar level of 2·5 and three hours after glucose a blood sugar level of 3·5. Later another test had been carried out and after a two hours' interval the blood sugar had been 1·6 and one and a half hours later 1·2. The flattening of the curve indicated definite diabetes. Dr. Mathewson thought the child would ultimately require "Insulin" to enable it to carry on. It required about 600 calories. The weight was unstable and on a higher diet the child tended to lose weight.

Ulceration of the Leg.

DR. A. PATTERSON, acting on behalf of DR. K. B. FRASER, showed a patient with ulceration of the leg. The patient had been shown at a clinical meeting in November, 1928, when a diagnosis had been sought. At that time rest in bed and hospital had been recommended and treatment of the underlying condition which was probably plumbism.

The Government Analyst had found 0·9 milligramme of lead in the urine. Definite punctate basophilia had been present, but no anæmia. The child had been in bed for three months and had been treated for plumbism and many different applications had been made to the knee and the condition had been even worse than before. "*Oscol stibium*" had been given without result; abscesses had occurred in the arm at the site of administration. No organisms had been obtained from the knee and the skin specialist said the condition was not tuberculous. No reaction had occurred to the Wassermann test nor to an intradermal tuberculin test. The urine had contained no albumin or blood. The patient was in bed in the fresh air all the time. No definite diagnosis had been made.

Appendicitis and Subphrenic Abscess.

DR. C. TUCKER showed a female patient, *ætatis* eleven years, who had been admitted on November 21, 1928. The history was one of pain in the abdomen four days before with vomiting soon after the onset of the pain. There was no previous history. On admission the temperature had been 38·3° C. (101° F.) and a diagnosis of acute appendicitis with abscess formation had been made. A mass had been palpable in the lower part of the abdomen

TABLE SHOWING PROGRESS OF DR. MATHEWSON'S PATIENT.

Date.	Sugar.	Acetone.	Calories.	Weight in Grammes.	Carbohydrate.	Protein.	Fat.	Sucrose.	Proportion to Fatty Acid.	Blood Sugar in Milligrammes %.	Units of Insulin.
December 12, 1928	+++	—	B.	9,201	—	—	—	—	—	0·4	—
December 21, 1928	Clear	—	—	8,890	—	—	—	—	—	0·16	—
December 28, 1928	++	Trace	293	—	6	1·6	20·5	1	1 : 5	0·129	—
December 29, 1928	Clear	—	—	—	—	—	—	—	—	—	2
January 1, 1929..	Clear	—	682	7,927	—	2·7	5·4	1	1 : 5	0·09	2
January 6, 1929..	Clear	—	994	7,899	—	3·75	8·4	1	1 : 6	—	2
January 10, 1929..	Clear	—	994	8,097	—	—	—	—	—	0·109	Ceased
January 13, 1929..	++	—	994	8,021	—	—	—	—	—	—	1
January 14, 1929..	++	—	994	—	—	—	—	—	—	—	1
January 16, 1929..	Clear	—	994	7,814	—	—	—	—	—	0·134	—
January 18, 1929..	+	—	994	7,870	—	—	—	—	—	G.T.	—
January 19, 1929..	Clear	—	994	—	—	—	—	—	—	—	—
January 20, 1929..	Clear	—	497	—	14	1·9	4·2	1	1 : 6	—	—
January 22, 1929..	++	—	497	8,021	—	—	—	—	—	—	—
January 24, 1929..	Clear	—	497	7,984	—	—	—	—	—	—	—

B. = "Bovril" given. G.T. = Glucose tolerance test.

on the right side. Operation had been performed and a mass with abscess had been found. A tube had been inserted and there had been a large amount of offensive discharge. The tube had been removed on November 27 and the discharge had still been present. The temperature had been normal on November 27. It had then risen and become swinging in type. The urine had contained pus cells and the leucocytes had numbered 17,000 per cubic millimetre. Three days later they had been 16,000 per cubic millimetre. On December 11 an X ray examination had been made and the radiologist had suggested the presence of fluid at the base of the right pleural cavity. A needle had been inserted, but no fluid had been found. On December 14 the chest had been examined by the fluoroscope and the restriction of movement of the diaphragm on that side had been found to be due to a mass below. The patient had had a short dry cough and restriction of movement on the right side. The respiratory rate had been increased to 30 and 35 per minute. It had been considered that a subphrenic abscess was present. Under "Novocain" and ether anæsthesia three centimetres of the ninth rib had been removed and the diaphragm had been found to be in direct contact with the pleura. It had been sutured to the parietal pleura round the opening and a space of one centimetre had been left. An incision had been made through this and an abscess had been found on the postero-lateral surface of the liver. Eight cubic centimetres (two fluid drachms) of very offensive pus had been removed and a tube inserted. The child had been very ill until December 27, when she had begun to improve. The tube had been removed on December 22. X ray examination had revealed progressive lowering of the liver and diaphragm. The liver had been very friable and the question had been whether any more pus was present.

At the time of the meeting there was very little discharge from the chest and from the abdominal wound and the general condition was good.

Obituary.

FREDERIC DOUGAN BIRD.

IT is in the nature of things that a man is born, lives a little while and dies; his place is taken by another and in the course of time he is forgotten unless his achievements have been of a very exceptional kind. The vast majority of men leave no permanent impression in the world; what they have done, does not reach beyond the environment in which they have lived and the period of their lives. A few are endowed with gifts of discovery, of discernment, of precept and their influence may extend far outside the sphere of their earthly activities and into the distant future. Often a beneficent influence may last long after the name of the originator has ceased to be associated with the doctrines that emanated from his brain. The name of Bird is in no danger of becoming unfamiliar in Melbourne or Australia, although the younger generation is unconscious today of the extent of its debt to the physician Samuel Dougan Bird, through whose influence the teaching of medicine was raised to a high standard between the years 1880 and 1892. His teaching, his example, his intellectual prowess live still in the School of Medicine of the University of Melbourne, although few remain to testify to the source of this vague influence. Frederic Dougan Bird, the son of the physician, was able to exert the influence of his ordered mind and irresistible personality for a longer period and the subtle effect of his learning, of his knowledge and skill and of his dignity has permeated many generations of students and will continue to do so for a long succession of years.

Frederic Dougan Bird was born in Richmond, in Surrey, on the banks of the River Thames, on May 27, 1858. His father had served with the British forces in the Crimea and his health had suffered as a result of the privations, exposure and strenuous exertions of the campaign. In 1861 the family sought the warmer climate of Australia and Samuel Dougan Bird chose Melbourne as the place in which he might regain his lost strength. Frederic was sent to the Scotch College where he distinguished himself at his lessons and in the playground. He shone at mathematics and was also a brilliant Latin and Greek scholar. He was always at the top of his class and eventually became *dux* of the school and was awarded a special gold medal in recognition of being the most brilliant student up to that time. In due course he left the Scotch College with a great reputation both among his fellows and among the teachers. He entered the University of Melbourne and as was anticipated he again forged to the front without difficulty. The school was relatively small in those days and the roll in his first year contained about forty names. In 1882 he graduated as a bachelor of medicine together with eighteen others, including James Eadie, William Moore and Martin Joseph Ryan. In 1884 he took the degree of bachelor of surgery and in 1886 he secured the degree of master of surgery, a degree that had been gained only once before. While at the university he excelled as an oarsman and was captain of the 'Varsity Rowing Club. Strange as it may seem to those who associate skill at billiards with an ill-spent youth, Frederic Dougan Bird was a first class exponent of the game and was fond of it. In 1880 a meeting of students was convened by Felix Meyer and T. R. H. Willis for the purpose of forming a society of medical students. J. W. Barrett was appointed secretary and F. D. Bird, William Moore, George Adlington Syme and C. J. Shields were among the most active of the original members.

After graduation Bird went to England and worked both at King's College Hospital and University College Hospital. At both he came into intimate contact with many men of note and with some young practitioners who were coming into prominence at that time. Perhaps the most remarkable of them was the late Victor Horsley. It was then obvious that Bird would not follow in his father's footsteps, but would choose the career of a surgeon. He returned to Melbourne and in 1884 he was appointed with William Moore half-time demonstrator of anatomy. He held this position for three years, when he was succeeded by George Adlington Syme. In the same year his father resigned the chair of medicine and two years later was elected a member of the Council of the University. About this time Frederic Dougan Bird was appointed honorary surgeon to out-patients at the Melbourne Hospital and in 1896 lecturer and examiner in surgery at the University. His knowledge of surgical pathology, of physiological processes and of surgical procedure was unusually wide; he was a fine operator and a sound diagnostician. Added to this his students found in him a teacher of extraordinary versatility and soundness of judgement. He taught from his own experience; what he had seen, first hand knowledge, was to him more reliable than the lessons perpetuated in text books. His lectures were in consequence far more interesting and far more valuable than those of his contemporaries who feared to deviate from the lines of orthodox teaching. He spoke clearly, elegantly, wittily. An ideal master from whom to learn the science and art of surgery. His students delighted in his lectures and demonstrations and in return for the great interest that Bird took in educating them, they gave him hard work and affection. During this time he established a large surgical practice and his reputation as an eminent surgeon was unchallenged. After having served as out-patient surgeon at the Melbourne Hospital for some years he became in 1891 honorary surgeon to in-patients. He held this position for a period of twenty-three years and gave up his work as senior surgeon when he joined the forces in 1914. He served for many years as surgeon to the Metropolitan Fire Brigade in Melbourne and later held the position of consulting surgeon to the Queen Victoria Hospital. He delighted in hospital work, for it gave him the opportunity of benefiting his patients under the most favourable conditions, of teaching his students and of advancing his own knowledge in the science of surgery. His fame soon spread beyond the confines of his native city. He was well known throughout the colonies then comprising Australia and his work was recognized in the old country and in the United States of America. It is impossible to record the many important events of his life in Melbourne up to the end of last century. Suffice

it to state that he maintained his place in the front rank as he had done in his younger days.

In 1905 he was chosen to be President of the Section of Surgery at the Australasian Medical Congress at Adelaide. He served as President of the Medical Society of Victoria and in many other ways was shown the high esteem and trust of his colleagues. In 1913 he travelled to England and at the International Congress of Medicine held in London in that year he held the position of Vice-President in the Section of Surgery. While in London he received a signal honour from the Royal College of Surgeons of England. He was given the fellowship of the College *honoris causâ*. Only once before had this distinction been conferred on an Australian; it has not been awarded since.

On the outbreak of war in 1914 he volunteered for service overseas and offered to the Governor-General to take with him a staff of nurses. His offer was accepted and he left Australia for Egypt with the first Expeditionary Force. After a short period of valuable service he was invited by the home authorities to transfer to the Royal Army Medical Corps and in February, 1915, he was created consulting surgeon to the British forces in Egypt with the rank of Lieutenant-Colonel. This promotion was a very exceptional one. Only eight surgeons had been appointed to similar positions in the whole British Army. He saw active service at Gallipoli and in Macedonia and was three times mentioned in dispatches. He was present at the original landing at Cape Helles and he took part in the evacuation. For his valuable services in this part of the campaign he received the honour of Commander of the Bath. In the later stages he was appointed consulting surgeon to the Mediterranean Expeditionary Force. A little later he became consulting surgeon to the British Army at Salonika. After that he went to England and was given the position of consulting surgeon to the Southern Command. It will be noted that throughout his war service also he held positions in the front rank, always leading and always setting an example for others to emulate.

Before he returned to Australia Frederic Dougan Bird had passed his sixtieth birthday. He therefore relinquished his active position at the Melbourne Hospital. In 1920 he was elected the first President of the Surgical Association of Melbourne and he took a very active part in the development of this organization. In the following year he retired from his position as lecturer in surgery at the University of Melbourne, after a period of service of a quarter of a century. It is difficult to find appropriate words to measure the value of these continued services to humanity and to his profession. Throughout his career he contributed excellent articles to medical journals. His presentation was always clear, definite and original. His style of writing and speaking was exceptionally good. In 1923 he retired from practice and only on rare occasions did he busy himself with matters surgical after that date. He remained a surgeon to the end of his days and continued to be as interested in the advances in surgery as he had been while he was still a teacher.

Since his retirement Frederic Dougan Bird has contributed a few articles to this journal. The last one was a delightful description of a walking tour to Wilson's Promontory with the late Harry Brookes Allen. Even more recently his writings may be recognized in these pages. The masterly way in which he chided an author in a review, the consideration he showed to those who had been perhaps too rash in their utterances, the dignified, erudite and convincing conclusions to which he subscribed, characterized his compositions. He was a book lover, a student of Dante and of many of the greatest *literati* of the past and the present generations, a brilliant conversationalist, witty, bold, but never cruel. While in London he was elected a member of the Athenæum Club, an honour of which he was very proud. His tastes in architecture and his knowledge of this art provided him and some of his intimate friends with genuine enjoyment. He took an interest in history and in consequence his knowledge of world history was extensive. He was a good botanist and a keen collector. His delight in walking and in exploring is too well known to need more than passing notice. What more is there left to say? The charm of his company, the kindly manner in which he acknowledged the good qualities of even mediocre people, the infectiousness of his wit and the unostentatiousness of his intellectual superiority, all this was recognized by those who were privileged to associate closely with him. Although his years numbered more than three score and ten, he remained mentally young to the last day. His sorrowing friends and colleagues extend their sympathy to his widow, his son, Dr. Dougan Bird, and his daughter.

Sir Richard Stawell writes:

By the death of Mr. Fred. D. Bird there has passed from the medical profession in Australia and from the community of Victoria a man who was a great surgeon, a man who had a great personality. In addition to his fine surgical knowledge and quite exceptional surgical skill, he was a cultured scholar, delightfully witty, widely read and remarkably well informed on all sorts of subjects. Courtesy was an essential part of his personality and he appreciated all forms of human refinement. He enjoyed the society of his fellows and particularly liked to entertain them and as he was a gracious and most hospitable host; one's mind is full of memories of pleasant walks and picnics and dinners which he had organized and given.

In addition to his remarkably fine mental equipment and culture, Fred. Bird had a very fine physical presence; all his days, even when ill health had crippled him, he had a most distinguished appearance. In his youth, as I first knew him, he was an exceedingly handsome man; tall, with a healthy athletic figure, he was in any gathering the "observed of all observers." I always remember meeting him many years ago, when, on some State occasion, he wore his uniform as a medical officer to the military forces; he was in great form that evening, interesting, witty and altogether most attractive. There sprang to my mind then the lines: "O, what a noble mind is here— The courtier's, soldier's, scholar's eye, tongue, sword!"

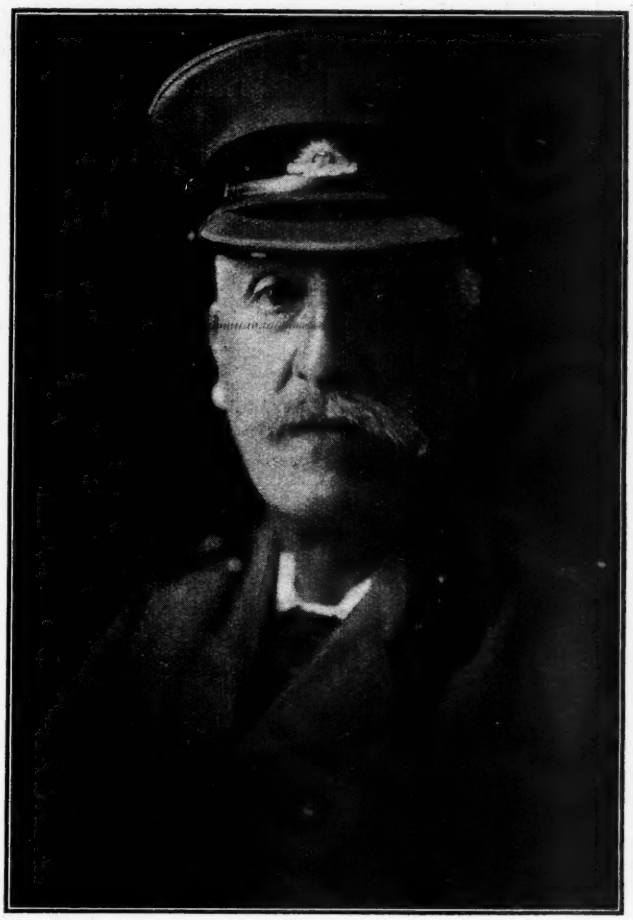
My acquaintance and my personal friendship with Fred. Bird began when I was a student and he was a demonstrator of anatomy in the dissecting room, about forty-five years ago. He was an urbane, pleasant and most helpful teacher; after he had "coached" some of us through some special course of anatomy, he arranged for us a country expedition. It was my first adventure into the Australian bush and among the Australian mountains and it was all a very wonderful revelation to me. From that time on and for many years I was often one of his companions on these expeditions.

Splendid and greatly to be admired as he was in the hospital wards, the lecture room, the operating theatre and in all professional work, yet on these expeditions he was wonderful, delightful. On the hottest day and during the hardest climb he was cheerful, helpful, indefatigable. If any of the party seemed to be faltering, Fred. Bird was by his side to add a lightness, a brightness and an interest on the way. I remember once when he had helped me over a weary stretch and when I had recovered from the feeling of exhaustion, he said: "You know you never really enjoy these expeditions unless at least once in the day you wish you were dead"; and then he passed on to talk of the place of pain in the scheme of things and of the discipline of difficulties in human life. Knowing his pardonable pride in the physical strength of his youth and manhood, and knowing his unaffected love for the open road and the bush on the mountain tops or by the sea, my heart used to ache when I saw him some years ago beginning to be crippled by gout, so that he could not walk and later could not even stand. My heartache was turned into a deep admiration for him and for his character when I realized that Fred. Bird refused to be cast down by his disability, but kept himself alert and interested in all things. Literally, to the last ten minutes of his life his intellect remained brilliant and his wit was as sparkling as ever. His lectures, his addresses on all sorts of subjects, surgical and artistic, his after-dinner speeches during these latter years, when he was suffering from crippling ill health, were amazingly clever and bright and thoughtful and he revealed to all his friends during these latter days a quiet courage, steadfast and ennobling.

Mr. Fred. Bird's unselfish service to the community and to the medical profession took the form chiefly of hospital work and clinical teaching. He was for many years lecturer on surgery and for practically all his working life he was an honorary surgeon to the Melbourne Hospital. His work in this way could hardly have been excelled. He did not specially identify himself with the arduous work of council and committee meetings of medical societies or of the Victorian Branch of the British Medical Association. He was by thought and temperament a thorough individualist and a conservative. He disliked debates, he was sensitive to criticism and even to disagreement and he was doubtful about the wisdom of any rigid organization of the medical profession.

I am inclined to think he felt that freedom for the individual was more important than unitedness. Of course, in one way he was right, but our problem is to try to reconcile these two driving forces in human activities. He often said he had no sympathy with the Prussian type of mind or with Prussian organization. He was, however, intensely patriotic and a great Imperialist.

Nothing could have been a finer gesture or grander than Mr. Fred. Bird's offer at the outbreak of the Great War. In all that he did and at all times there was something of the grand manner about him. At the beginning of the war he offered his services to the Imperial authorities and undertook to take with him a staff of nurses and equipment for hospital work. It was a magnificent thing to do, for it meant an immense financial responsibility for him. His offer was accepted, but after disembarkation in Egypt it was found impossible to fit Colonel Bird's hospital unit into the scheme of the military medical organization and the hospital unit was disbanded. This made things difficult and disappointing to him. His personal war service was splendid and was recognized as such by the authorities, but the grand patriotic spirit of his original offer appeared never to have been sufficiently known or adequately appreciated.



His war service difficulties and other difficulties in his life he bore with a confidence in himself and a candour which commanded the respect of his friends and intensified their personal affection for him. Yes, in many ways he was a great man, exceptionally gifted and cultured. Personally, I feel that Mr. Fred. Bird will always be remembered among us as a most skilful surgeon, a scholarly and witty speaker, a delightful companion and a gallant gentleman.

Mr. R. Hamilton Russell writes:

On May 29, when the whole of the medical profession in Australia seemed barely recovering from the great shock and sense of loss occasioned by the death of Sir George Syme, his life-long friend and colleague, Fred. Bird, died at the age of seventy-one.

Bird arrived in Melbourne with his parents at the age of three years and received his education at the Scotch College, where he quickly gave evidence of unusual ability and love of scholarship. He became successively *dux* in mathematics and in classics and eventually *dux* of the school. He was also the recipient of a special gold medal presented to the most brilliant scholar of the year. From school he passed to the university, where an excellent studentship pointed the way to a final period of study at King's College Hospital, London. Returning to Melbourne he shaped his course for a surgical career, becoming first, demonstrator of anatomy and subsequently lecturer in surgery; this post he held for twenty-five years. He also became, relatively early, a full in-patient surgeon to the Melbourne Hospital; he retained this position until his retirement which was practically determined by the outbreak of war. At the war Bird gave generous and valuable service; he served in the Gallipoli expedition and in Macedonia, being later transferred to England where he was Consulting Surgeon in the Southern Command. He was decorated with the C.B. (military).

His contributions to surgical literature were not numerous, but they were always characterized by high seriousness and thoughtfulness; from among them may be selected as especially noteworthy his address as President of the Section of Surgery at the Australasian Medical Congress at Adelaide in 1905. The subject chosen was abdominal syphilis and the contribution attracted widespread notice and interest by reason of the wealth of clinical material and close observation displayed in regard to a subject that had rather escaped the attention of surgeons up to that time.

Success in practice and professional honours came to him full-handed and the height of his legitimate ambition was reached when in 1913 he received the rare distinction of the honorary Fellowship of the Royal College of Surgeons of England.

Nobody could have taken his life's work more seriously and earnestly than he did and yet he seemed always to suffer (to a very slight extent it is true) from a certain handicap derived from his own brilliant qualities. Dowered by Nature with a wealth of her gifts that seemed almost unfair, a splendid physique, rare aristocratic charm of manner, a facile wit and open-handed generosity, such qualities were inevitably prone to throw into shadow the graver virtues of acquired wisdom and it was not easy to avoid the error of underestimating his true talents. He himself was determined that his reputation should be based on solid merit; he made no mistake and he succeeded.

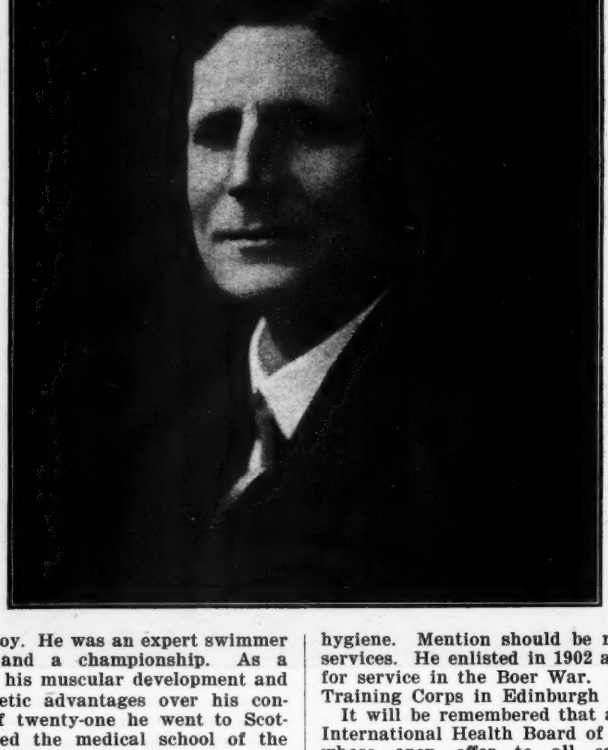
He was a great lover of the country and the wide spaces and mountainous hills of Australia seemed in his younger days to offer him a challenge he would dearly love to take up. A most delightful annual function in which he doubled

the parts of host and guide, was known as "Fred. Bird's Walk." This consisted mainly of a long walk and a lavishly provided picnic luncheon, to which a large number of his students and friends were invited.

The last two or three years of his life offered a wonderful display of the virtues of courage and cheerful patience under a hopeless and crippling infirmity in spite of which he continued to perform numerous social functions almost up to the last few days of his life.

DUNCAN GLENEROCHIE ROBERTSON.

THE world of medicine in Australia has suffered many severe blows within recent months through the death of eminent members of the profession. The tragedy of the death of Dr. Duncan Glenerochie Robertson in the prime of life represents one of the most serious losses it has sustained, since he was apparently in sound health and was certainly carrying out his important work in industrial hygiene in a manner that placed him at the head of his specialty. Dr. Robertson arrived in Perth for the purpose of continuing his investigations into the prevalence of the condition known as miners' phthisis, on June 9, 1929. During the morning he was walking with a friend in Hay Street, when he complained of a pain in the left side of his chest. They entered a pharmacist's shop and he drank a dose of bicarbonate of soda. He fell to the ground. When a medical practitioner arrived, it was found that he was dead. Death is ascribed to *angina pectoris*.



Duncan Glenerochie Robertson was the son of a Melbourne citizen. He was born on March 10, 1883, and was therefore forty-six years of age. He attended the Brighton Grammar School where he was a distinguished scholar and a very popular boy. He was an expert swimmer and gained many prizes and a championship. As a youngster his fine physique, his muscular development and his tallness gave him athletic advantages over his contemporaries. At the age of twenty-one he went to Scotland and in 1905 he entered the medical school of the University of Edinburgh. He was highly successful throughout his medical course and was noted from the early days as a brilliant student. In 1909 he gained the Freeland Barbour Fellowship in Anatomy, Physiology and Pathology. In the same year he obtained the degrees of bachelor of medicine and bachelor of surgery with first class honours. Two years later he took the diploma of public health and in 1912 he secured the degree of doctor of medicine by a thesis on alimentary glycosuria. Throughout the whole of the seven years spent in Edinburgh he worked hard and made full use of his natural gifts to equip himself for the important work of his later life. After the completion of his undergraduate and post-graduate studies he accepted the position of house surgeon at the Grimsby and District Hospital in Lincolnshire. In September of the same year he served as Assistant Medical Officer at one of the fever hospitals under the Metropolitan Asylums Board in London. In May, 1913, he was appointed house surgeon at the Wirrell Fever Hospital. He returned to Australia late in 1913. At that time there was an epidemic of mild variola in New South Wales and the Quarantine Department was making strenuous and successful efforts to cope with the outbreak. Duncan Glenerochie Robertson was appointed to a temporary position at the Quarantine Station at North Head, Sydney. He had charge of the patients placed in isolation in the station. He carried out his duties in a most skilful manner and proved himself to be a valuable officer in the department. A little later he was appointed Chief Quarantine Officer in the general division in Victoria. He displayed his resourcefulness and knowledge in this office and confirmed the good opinion that had been formed of his unusually extensive ability. In July, 1915, he joined the Australian Army Medical Corps Reserve and volunteered for service overseas. He served on the hospital ship *Kanowna* for some time. Before this he had been loaned by the Commonwealth Government to the Government of Tasmania and acted for a short time as Chief Health Officer for Tasmania. It is unnecessary in this place to recite the history of the Health Department of Tasmania and to recall the many difficulties with which the Government of the State was faced and is still encountering. When Duncan Glenerochie Robertson returned to duty in Australia he was transferred to Perth where he became Chief Quarantine Officer for Western Australia. In the following year he again joined the forces and went to France as captain in the Australian Army Medical Corps. After the armistice he returned to Australia and started his special work in industrial hygiene. Mention should be made of his earlier military services. He enlisted in 1902 at the age of seventeen years for service in the Boer War. Later he joined the Officers' Training Corps in Edinburgh from 1907 to 1911.

It will be remembered that about a dozen years ago the International Health Board of the Rockefeller Foundation, whose open offer to all countries of the assistance of the Board to institute hookworm campaigns had been accepted by the Commonwealth and the Queensland Governments, sent first Dr. J. H. Waite and later Dr. S. M. Lambert to act as Director of the Australian Hookworm Campaign for a fixed term of years. About the year 1919 conversations took place between the representatives of the International Health Board and the Commonwealth authorities in regard to the establishment of departments of industrial hygiene, of sanitary engineering and of tropical hygiene. The results of the negotiations were the organization of three new departments and the loan by the International Health Board of three specially trained officers. Dr. A. J. Lanza came to Australia and helped the Federal Department of Health to establish the

Division of Industrial Hygiene in 1921. A year earlier Robertson had been at Bendigo to inquire into the prevalence of tuberculosis among the mining population. A committee had been appointed by the Department of Trade and Customs with Dr. J. H. L. Cumpston, then Director of Quarantine, as chairman, and Dr. E. Robertson among others as members, to plan the campaign of inquiry. The control was placed in Duncan Glenerochie Robertson's hands and the work was completed with conspicuous success in the course of six months. Following this work, he was lent to the Broken Hill Associated Smelters at Port Pirie, South Australia, where he carried out an extensive and difficult task of ascertaining the industrial hazards of a large group of workers and of controlling the conditions of work from a standpoint of hygiene. When Dr. A. J. Lanza began his organization, Robertson was appointed to collaborate with him as the Australian member of the division. The coordinated work of these two industrial hygienists was of the happiest and most fruitful nature. Both were men with big bodies, big hearts and big minds. Both recognized the ideal objectives of this innovation into public health work. Both were fully seized with the knowledge of the opposition that would be placed in the way of the consummation of the ideals by employers and employees until the advantages to each had been proven. The task demanded diplomatic handling, leading by suggestion rather than propulsion, gradual development rather than rapid enforcement. Robertson proved his ability to meet new situations and to overcome apparently insurmountable difficulties. In 1922 he issued through the Department of Health a service publication on the scope of industrial hygiene and from that time he was recognized as the authority on this subject in the Commonwealth. Since then others have taken up the study of industrial hygiene and have done much admirable work, but Duncan Glenerochie Robertson has remained up to the end of his life preeminent in this branch of medical science. In 1923 the arrangements entered into by the Commonwealth of Australia and the International Health Board of the Rockefeller Foundation terminated and the experts lent for the purpose of aiding in the establishing of the several divisions of the work were withdrawn. Dr. Lanza left Australia with many regrets and with a feeling of a personal loss. He had the highest regard and admiration for Duncan Glenerochie Robertson as an industrial hygienist of exceptional attainment and he valued his comradeship for its own sake. The Division of Industrial Hygiene did not flag when Robertson took over the sole control. It was evident that he had established the division on the soundest of foundations and that he had worked hard, wisely and well in extending its activities and in rendering it of immeasurable value to the Commonwealth. In 1923 an opportunity was offered to him to enlarge his experience and to widen his knowledge in his branch of work. He was offered a travelling scholarship by the Rockefeller Foundation for twelve months. With the sanction of the Director-General of Health he spent the twelve months in Europe and America investigating the systems in vogue in the chief countries of the world and in studying problems from many special aspects. He returned in due course and again took over the control of his division. Among the publications which have been issued by him, the following may be mentioned: "Small Pox Epidemic in New South Wales" (1913), "Inquiry into the Prevalence of Tuberculosis at Bendigo" (1920), "An Index to Health Hazards in Industry" (1922), "Industrial Accident Prevention" (1924), "Inquiry into the Morbidity and Mortality Statistics of the Employees of the New South Wales and Victorian Railways" (1926) in collaboration with Dr. G. H. Taylor, "An Investigation of Certain Health Aspects in Persons Engaged in the Woolsorting Industry" (1927). He contributed some articles to this journal and read some papers at sessions of the Australasian Medical Congress (British Medical Association). This journal is greatly indebted to him for much valuable assistance in connexion with the literature on industrial hygiene. He was ever ready to exert himself for the benefit of his profession and for the advantage of the people.

Duncan Glenerochie Robertson married Miss Beard, of Sydney, in 1918. During the greater part of their married life they have resided in Melbourne, but since the removal of the Health Department of the Commonwealth to Canberra their home was transferred to the capital. They have no children. In private life he was quiet, modest, entertaining and wholly charming to all who knew him well. He was a very handsome man, with strength of mind and of body evident from his every movement and expression. Many of his contemporaries feel acutely the loss they have sustained by the death of so splendid a friend. The sympathy of the whole medical profession is extended to his widow.

Dr. H. G. Chapman writes:

Death has taken away from us unexpectedly D. G. Robertson who had many of those qualities which bind men together in friendship. Kindly and considerate for others, he knew readily the impulses and emotions which begat the speech and directed the actions of those that he met. Gifted with the spirit of harmony, he tried by persuasive methods to lead to agreement men inclined to differ from others through lack of sympathy. His loss will be felt by many to whom his friendship was a prized possession.

Industrial hygiene in Australia was greatly indebted to his earnest inquiring mind. He knew that little had been done to provide evidence on which a sound judgement of the medical problems of industry could be given. He persevered in active inquiry into the service of the worker, so that more might be learned of the circumstances which might affect the worker's health. Together with the spirit of the investigator, he had a desire that knowledge might be arranged in an orderly manner, together with the belief that knowledge might be used to modify the circumstances of industry to make better the health of those employed. He will be remembered in Australia for his early work at Port Pirie, where he fostered the idea that the medical welfare of the worker was as essential a part of the great industry as the separation of lead, silver and other metals. The fine example that he set to his colleagues on the staff of the Associated Smelters, has borne fruit in the attitude of the company towards the bodily health of those who work for it. Much criticism has occurred in respect to what the great mining companies that have developed Broken Hill have done in regard to industrial hygiene, but no employers have gone further in Australia in meeting the obligations imposed by the working conditions of their industry on the health of their employees.

The late Dr. Robertson, after a visit to the United States, carried out for the Federal Department of Health a survey of the health of miners at Bendigo. For the Commonwealth he took up the organization of the section of industrial hygiene within the Federal Department of Health, after the preliminary work of his friend, Dr. Anthony Lanza, lent to the Commonwealth Government by the Rockefeller Foundation of New York to assist the promotion of international health. It will remain for others to speak of his service to the citizens of the Commonwealth in his official post. As one who had opportunities of observing his work and its applications, I would bear tribute to the inspiration for the propagation of knowledge that he diffused around him.

JOHN JAMES KELLY.

WE regret to announce the death of Dr. John James Kelly which occurred at Sydney on June 25, 1929.

British Medical Association News.

MEDICO-POLITICAL.

THE Council of the Queensland Branch of the British Medical Association has requested us to publish the following memorandum. A special subcommittee of the Council is now engaged in drawing up the agenda paper for the

conference. Medical practitioners interested in the subject of contract practice are invited to forward comments to the Honorary Secretary of the Queensland Branch, 35, Adelaide Street, Brisbane.

DRAFT—PROPOSED INTER-STATE CONFERENCE OF PRACTITIONERS ENGAGED IN CONTRACT PRACTICE OR INTERESTED IN THE WELFARE OF PRACTITIONERS ENGAGED IN CONTRACT PRACTICE.

Proposed Business of Conference.

It was suggested at last meeting of the Federal Committee that the Queensland Branch should make arrangements for holding this conference. It is the intention of the Council of the Queensland Branch to arrange this conference.

The business proposed is:

1. To consider the changing conditions of all classes of contract practice.

2. To attempt to define the position of the British Medical Association in Australia in regard to a national health scheme.

3. To consider ways and means of giving effect to recommendations made by such conference.

In regard to (1) it is suggested that each Branch should before the conference prepare and circulate for the benefit of the other Branch Councils a statement concerning the present position of medical practice in their respective States. A special committee could be appointed to collate and correlate the statements made by each Branch.

In regard to (2) the introduction of a national health service must be considered more than a possibility, as, even though such a service cannot be introduced by the Federal Government, it may be arrived at by the Federal and State Governments acting in conjunction.

In regard to (3), should a central body acting on behalf of the Branches be formed immediately to consider all or any of these matters?

Points to be taken into consideration in preparing a statement of the position in Queensland and to indicate how the Queensland Branch views the situation generally:

(i) If a national health scheme is introduced, it seems likely that the Federal model lodge agreement will be the basis of any contract entered into by the Federal or State authorities on behalf of all those people having an income up to £416 *per annum*. The British Medical Association should consider whether such a proposition is acceptable.

(ii) It cannot be too strongly insisted upon that a scheme like this cannot be considered as an entity apart from conditions of hospital practice and from various municipal and State medical activities.

(iii) The Association should give attention to the needs of the numerous so-called middle class people who are unwilling to accept charity, but for whom private hospital fees and large fees for special services are an expense beyond their resources.

Provision might be made for this class by an insurance scheme at a higher rate than that of the Federal model lodge agreement and it might be possible to arrange insurance against private hospital fees and operative fees.

This question, of course, would need much investigation and such investigation is overdue.

(iv) It is well to consider certain expressions of opinion taken from a report on "Inroads in Private Practice," Supplement to *The British Medical Journal*, November 3, 1928.

(*a*) The function of health authorities should be confined as much as possible to the prevention of disease.

(*b*) The work of the whole-time medical officer should be confined to the administration, inspectional, instructional and consultative work.

(*c*) The profession recognizes the propriety of the State making through central departments and local authorities provision for giving medical advice and treatment, both as regards certain forms of disease and to such classes of the population as in the bulk are unable to provide the necessary advice and treatment for themselves.

(*d*) Whenever possible, all medical advice and treatment at local clinics should be given on a part-time basis by private practitioners, whether it is within the sphere of general or special practice.

(*e*) It is essential that the private practitioners of an area should take a wide interest in the health service of the area and be encouraged to take an interest in its activities.

(*f*) It is important that advice and treatment should not be given at clinics to persons able to pay. Such patients should be recommended to seek advice from their private practitioners.

(v) In regard to baby clinics it is essential that sick children should not be treated at these clinics, as this practice is likely to result in spreading disease among healthy children. To prevent overcrowding, mothers should as far as possible attend clinics by appointment. The same remark applies to attendance of patients at hospital out-patient departments. In no instance should the baby clinic be considered as an out-patient department of a hospital for sick children.

(vi) Intermediate wards should be established in public hospitals and all practitioners should have the right to make use of such wards.

(vii) In regard to contributory schemes and hospitals and group systems, members of such schemes should no longer be regarded as objects of charity and therefore the full cost of benefits offered should be covered by the premiums paid by or for members.

(viii) In regard to specialists in contributory or insurance schemes there should be a panel formed of those specialists willing to engage in such work and there should be free choice of private practitioner by members and *vice versa*.

(ix) Consider *Workers' Compensation Act* in Queensland.

(x) Responsibility for fees in accident cases.

(xi) Consider necessity for improving standard of practice by improving medical education and providing for post-graduate work.

(xii) Consider superannuation scheme for the medical profession.

(xiii) Provision of nursing service to assist general practitioner who has often to work alone.

(xiv) Consider question of hospital policy generally. Question might be discussed at a joint meeting of the Federal Committee of the British Medical Association and College of Surgeons of Australasia.

(xv) Consider medical conditions in remote parts, aerial medical service.

(xvi) It is realized that it will take time to go into these matters, but a full time British Medical Association secretary could conduct inquiries on behalf of the profession.

(xvii) As a general rule it is better in the patients' interests that general practitioners should undertake the treatment of patients, in so far as his training makes him fit to undertake the responsibility of treating his patients effectively, as he has an intimate knowledge of the patients' life history and home surroundings.

(xviii) In regard to general practitioner and preventive medicine, there can be no more practical way of securing general practitioner's interest than by employing him as much as possible in the work of local authorities.

(xix) All of these matters must be taken into consideration in any complete scheme of national insurance.

Congress Notes.

AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

THE following information has been supplied by the Executive Committee of the third session of the Australasian Medical Congress (British Medical Association), Sydney, 1929.

Change of Address of Office.

Members are notified that the address of the Congress office has been changed from B.M.A. Building, 30 to 34, Elizabeth Street, to Savings Bank Building, 21, Elizabeth Street, Sydney.

Section of Preventive Medicine and Tropical Hygiene.

The officers of the Section of Preventive Medicine and Tropical Hygiene have arranged a tentative programme. There will be three meetings in combination with other sections. The first is with the Section of Medicine and the Section of Pathology and Bacteriology, at which the subject of the prevention, diagnosis, treatment and control of scarlet fever and diphtheria will be discussed. The first speaker for the Section of Preventive Medicine and Tropical Hygiene will be Dr. John Dale, of Melbourne.

The second meeting will be with the Section of Naval, Military and Air Force Medicine and Surgery. At this meeting the subject of aviation from its medical aspect will be discussed. Dr. F. MacCallum, of Canberra, will speak for the Section of Preventive Medicine and Tropical Hygiene.

The third combined meeting will be with the Section of Pædiatrics and the Section of Obstetrics and Gynæcology. The subject for discussion will be natal and neonatal mortality and morbidity. Dr. Agnes Bennett, of Wellington, New Zealand, will be the chief speaker for the Section of Preventive Medicine and Tropical Hygiene.

Dr. Vera Scantlebury, of Melbourne, will submit a paper on a scheme for establishing uniformity in infant feeding methods.

The problem of venereal diseases will be dealt with from two points of view. Dr. K. S. Macarthur Brown, of Sydney, will read a paper on the incidence, diagnosis and control of venereal diseases in delinquent girls. Dr. J. S. Cooper Booth, of Sydney, will speak on the question of venereal disease control in New South Wales and some suggestions for its improvement.

It is anticipated that a discussion will take place on the subject of silicosis and tuberculosis. Dr. S. A. Smith, of Sydney, Dr. C. Badham, of Sydney, and Dr. H. V. Baret, also of Sydney, have promised to present papers.

Tuberculosis as usual will figure largely in the programme. A paper has been announced by Dr. J. Bell Ferguson, of Melbourne. Dr. H. M. James, also of Melbourne, will submit a paper on contacts of tuberculous patients.

Among other papers on the programme are "The Health of the Whites in North Australia," by Dr. —. Cook, of Darwin, and "Unusual Clinical Conditions in Aborigines," by Dr. W. B. Kirkland, of Darwin.

Opportunity will be offered to members of Congress to investigate various matters of hygienic interest in New South Wales. Visits will be arranged to certain sections of the Sydney water supply. Other places of interest will also be visited.

The President of the Section of Preventive Medical and Tropical Hygiene is Dr. R. C. Everitt Atkinson, of Perth, and the Honorary Secretary is Dr. E. S. Morris, Department of Public Health, Sydney.

Correspondence.

A CORRECTION.

SIR: I wish to point out a mistake which has been made in the article entitled "A Form of Typhoid Fever Found in North Queensland." This article was printed in the issue of May 18. On page 660 in the second last paragraph, first column the words "Anti-Serum (Rawlings)" occur twice. The words, of course, should read "Emulsion (Rawlings)."

Yours, etc.,

A. H. BALDWIN, M.B., D.P.H.

Australian Institute of Tropical Medicine,
Townsville,
June 17, 1929.

Public Health.

VARIOLA IN NEW SOUTH WALES.

THE Director-General of Public Health of New South Wales desires to bring the following announcement to the notice of members of the medical profession in the State.

Recent announcements in the press to the effect that a patient suffering from small pox had been admitted to the Coast Hospital necessitates an authoritative statement for the information of the profession.

On Saturday, June 22, 1929, the Young Australia League contingent returned to Sydney *per* s.s. *Aorangi*, which left Vancouver on May 30, 1929, calling at Honolulu, Suva and Auckland *en route*. There had been several cases amongst the party of what was considered to be varicella and on arrival at Sydney one boy (W.K.) was convalescent and another (A.T.) was suffering from a condition regarded as varicella. W.K. was allowed to proceed to the home of friends; A.T. was sent to the Coast Hospital as suffering from chicken pox, but the disease was subsequently diagnosed as modified small pox known as "alastrim." Subsequent events have been announced at length in the daily press and it is hoped that the vaccination of passengers and crew of s.s. *Aorangi* and of the contacts of the individuals mentioned will prevent any spread of the infection.

To assist in tracing any future source of infection and to reduce to some extent the possibility of a mistaken diagnosis, varicella is to be proclaimed a notifiable infectious disease.

Medical practitioners are requested to pay special attention to any condition which shows signs suggestive of variola. In case of doubt the Department of Health should be communicated with so that every assistance in arriving at a definite diagnosis may be given.

Adequate supplies of lymph can be purchased from Commonwealth Department of Health (Customs House, Sydney).

Where private arrangements for vaccination cannot be made it will be carried out by the Department of Public Health at 93, Macquarie Street, Sydney.

Medical Prizes.

THE Burfitt Medal of the Royal Society of New South Wales and fifty pounds were awarded to Dr. N. D. Royle on May 29, 1929, for his papers and other contributions published during the last three years deemed to be of the highest scientific merit.

NOTICE.

ON July 1, 1929, some letters delivered at The Printing House were stolen from the letterbox. Subsequently a few cheques were found in the Victoria Park and were returned without envelopes or covering letters to The Australasian Medical Publishing Company, Limited. We appeal to those who may have written to the company or to the journal about this time and who do not receive any acknowledgement of their letters, to communicate with us as soon as possible.

WE are anxious to obtain the following journals on loan: *Wiener Medizinische Wochenschrift*, December 9, 1926 (Volume XXXIX); *Glasgow Medical Journal*, January, 1923. If any reader who takes either of these journals, would be prepared to lend the numbers sought for a fortnight, we should be greatly indebted to him and would undertake to return the journals as soon as the contained articles have been consulted.

A DINNER OF GRADUATES OF SCOTTISH UNIVERSITIES.

We have been asked to announce that it is proposed to hold a dinner by the graduates of all faculties of the Scottish Universities in Sydney. The date has not yet been fixed, but it is suggested that the dinner may take place in August. Graduates of Scottish Universities interested in this movement are requested to communicate with Dr. W. W. Ingram, M.C., 185, Macquarie Street, Sydney.

Books Received.

REGIONAL ANESTHESIA: ITS TECHNIC AND CLINICAL APPLICATION, by Gaston Labat, M.D.; with a Foreword by William J. Mayo, M.D.; 1928. Philadelphia: W. B. Saunders Company; Melbourne: James Little. Royal 8vo., pp. 584, with illustrations. Price: 37s. 6d. net.

ANNALS OF THE PICKETT-THOMSON RESEARCH LABORATORY: Volume IV, Parts I and II: The Pathogenic Streptococci; 1928 and 1929. London: Baillière, Tindall and Cox. Demy 4to., pp. 509, with illustrations. Price: 42s. per volume net.

THE MOBILIZATION OF ANKYLOSED JOINTS BY ARTHROPLASTY, by W. Russell MacAusland, M.D., and Andrew R. MacAusland, M.D.; 1929. Philadelphia: Lea and Febiger. Royal 8vo., pp. 252, with illustrations. Price: $4.00 net.

DIAGNOSTIC METHODS AND INTERPRETATIONS IN INTERNAL MEDICINE, by Samuel A. Loewenberg, M.D., F.A.C.P.; 1929. Philadelphia: F. A. Davis Company. Royal 8vo., pp. 1055, with illustrations. Price: $10.00 net.

Diary for the Month.

JULY 5.—Queensland Branch, B.M.A.: Branch.
JULY 9.—Tasmanian Branch, B.M.A.: Branch.
JULY 9.—New South Wales Branch, B.M.A.: Ethics Committee.
JULY 10.—Central Northern Medical Association, New South Wales.
JULY 11.—Victorian Branch, B.M.A.: Council.
JULY 11.—New South Wales Branch, B.M.A.: Clinical Meeting.
JULY 12.—Queensland Branch, B.M.A.: Council.
JULY 16.—Tasmanian Branch, B.M.A.: Council.
JULY 16.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

Medical Appointments.

Dr. C. T. C. de Crespigny (B.M.A.), of Adelaide, has been elected a Fellow of the Royal College of Physicians of London.

* * *

Dr. Allan Coleman Keane (B.M.A.) has been appointed a Public Vaccinator at Kilmore, Victoria.

* * *

Dr. Gilbert Elliott Aitken (B.M.A.) has been appointed, under the provisions of the *Public Charities Act*, 1873, of Tasmania, a person to demand, sue for and recover any sum of money payable by any indigent person or relative, under the said Act.

* * *

Dr. Whitfield De Witt Henty (B.M.A.) has been appointed Acting Superintendent of the Hospital for the Insane and Receiving House, Royal Park, Victoria.

* * *

Dr. Frank Wiseman Doak (B.M.A.) has been appointed Honorary Surgeon, Coast Hospital, Little Bay, New South Wales.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xx.

ST. MARGARET'S HOSPITAL, SYDNEY: Resident House Surgeon.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company, Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital. Toowoomba Friendly Societies Medical Institute. Mareeba Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to position at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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